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### The Beattie Smith Lectures (MELBOURNE UNIVERSITY).

#### ON INSANITY.

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#### LECTURE III.

If all individuals who came from psychopathic stock, could become sterile, the incidence of insanity, except in certain varieties due to trauma and gross brain disease, would be almost wiped out in two generations. This necessity for sterility does not apply so much to the intellectual psychopaths, because like the intellectual sane their offspring are few in number, while the members of the non-intellectual class, psychopathic or otherwise, are unusually prolific. This is not through interference with Nature, but due to one of the recognized facts in the ascent of mammals, Spencer's conclusion being that the rate of production varies inversely with the degree of individuation. The principle of "the liberty of the subject" in the British Constitution will be an unsurmountable obstruction to the

enforcement of this doctrine until the community is educated up to the same standard of thought in regard to mental disease, as it has been in regard to certain contagious diseases. The laws of quarantine segregate people when a dangerous communicable disease is present, but in mental disease people are placed under control only when they are a danger from a policeman's point of view to themselves or the rest of the community. People are not yet educated up to the perspicacity that recognizes the cost to the country of inferiority in mental standard. This inferiority creates crime, mental disease, venereal and general disease. A higher grade of intelligence and a lower percentage of constitutional inferiority in the community would diminish all these. It has been said that the big ventures of the world such as the making of canals, harbours, pyramids, roads and other great works have been possible only through the employment of non-intellectuals. The German junkers called the non-intellectuals of the country "cannon food." Whatever their value to a country when sane, the non-intellectuals are a heavy burden when they have a psychopathic inheritance. The medical profession can help to educate the people in the preventive treatment of insanity. They can point out

to those with a strong psychopathic inheritance the advisability of having no children. This necessitates instruction in the contraceptive measures which would be suitable for their station in life and intelligence. There are also books written upon the subject by scientific men and women of repute which could be recommended to them as a guidance. Even if the contrivances do not give 100% efficiency, they will keep down the numbers in these families which are usually very prolific. Three out of a family of fifteen are in the Victorian Lunacy Department and the police say that the remainder are no better than those already certified. As it is the vulnerability of the neurone that is inherited, every member of a psychopathic family runs the risk of being a potential mental patient, so that in order to prevent this potentiality becoming an actual mental attack the family medical attendant should take the opportunity at all times and especially on the occasion of the onset of mental symptoms in one of the members, when it would be most effective, to impress upon the others of the family the advisability of living regular lives as free from mental worry and physical stress as their circumstances will permit. A member of such a family should not take a position such as signalman in a railway yard, become a member of a stock exchange or take any other position where there is sustained nervous output. Any indication of the position being unsuitable should suggest an immediate change for another less arduous. Hard physical work never produced mental disorder in one not prone to it, nor by itself will it cause insanity in the predisposed. It is worry that makes men mad. "From labour health, from health contentment springs," says Beattie in the *Minstrel Book I*, verse 3. Especially should the times of adolescence and climacteric be singled out for periods of "go slow." The increase of primary dementia which is a disease of adolescence, suggests that the increased stress of present day civilization acts upon vulnerable neurones when they are passing through a period of instability due to the changes of adolescence. At the periods of adolescence and climacteric the body is undergoing an adjustment of its endocrines. In the same this is manifested in the boorishness and restless, clownish or hoyden behaviour of the adolescent and in the nervous, fearsome and depressed attitude of the climacteric victim.

#### Treatment of Early Insanity.

The early treatment of insanity should take place before there is any insanity. Unfortunately in many cases relatives do not recognize that the early or prodromal symptoms are those that require the assistance of a medical man. The unfortunate patient is often looked upon as being bad tempered, disobliging, stodgy, unsociable or what is generally known as being "run down." Sometimes the symptoms are a general carelessness of dress, speech and behaviour and a lack of interest in his or her surroundings. After a patient has been certified to an institution, the relatives will tell the medical officer of alteration in health, conduct or disposition of the

patient dating back many weeks or months. That was the time when the medical man should have first seen the patient. It is frequently only when something very unusual in the patient's conduct has taken place that the doctor is sent for. Although not so satisfactory as it would have been if the friends had sought the practitioner early, still much can be done at this stage by suitable treatment to prevent the patient drifting on to actual well established insanity. The first step when investigating a case of supposed insanity is to ascertain to what extent the patient differs from a normal individual and also from his usual state. The general appearance of expression, dress, tidiness and cleanliness must be noted and compared with the personal or communicated knowledge of what was his previous appearance. His habits, behaviour and speech must be investigated in the same manner. If he is uncommunicable in conversation, a patient will sometimes write what he will not put into words. This applies especially to female patients, when the content of their minds is of a kind which outrages their sense of decency. Try and secure some of the recent letters they have written to friends. Both the contents of these letters besides the grammar and spelling will often be of help. Delusions may be expressed therein. Incoherence, confusion of thought, poverty of vocabulary and elision of words in a sentence are all suggestive of disorder of the mind in persons whose education warrants better results. Always bear in mind the age, sex, occupation, nationality, social grade and financial position of any patient under examination. If the patient is an alien, secure the help of an interpreter selected by the consulate of the country to which the patient belongs. Ask what kind of books the patient reads and what he has been reading recently. All races of mankind seek the aid of the supernatural against what they cannot combat by physical effort, whether it be by charms, amulets, ceremonies or sacrifices, so that it is not unusual to find that a patient, worried by unfamiliar feelings and thoughts due to a disordered brain, is reported by relatives to be reading the Bible all day. Any tendency to withdraw from his accustomed social circle should be investigated for an adequate cause.

When the result of this preliminary investigation of what Dr. Beattie Smith used to call the acts, mind and facts, indicates that the mind is affected, the the next step is a thorough inquiry into the cause of the mental disturbance. The first thing to do is to gauge the intensity of the hereditary influence, as this helps in diagnosis and prognosis. The stress or stresses responsible for the disturbance must then be sought. As stated before, these are multigenerous and the investigation requires a patient examination of the whole physical and psychical life of the individual. The mental upset may be dependent upon a physical or a psychical cause, the latter acting through the autonomic system upon the physical health of the neurone. Every organ and function of the body requires a complete overhaul and a blood test for the presence of syphilis should be obtained in every case.

After winning the confidence of the patient and satisfying himself that the atmosphere of physician and patient has been firmly established in the mind of the patient, the practitioner may commence to seek for any psychical stress that may be present. Establishing himself in the confidence of this class of patient is worth the time spent in so doing, as the nature of the questions that require answers, necessitates that feeling of "*en rapport*." This is not the application of the systems of psychoanalysis, word association or interpretation of dreams, but simply a series of straight out questions and answers. Nearly all mental diseases in the early stage have a period of depression due to the physical ill health present and the first simple inquiry of "Is anything worrying you?" may often give the psychical cause of the trouble straight away. If the condition is more advanced this question is not so successful, because if there is mania present the patient will deny that there is anything the matter with him and if melancholia is well established, the assigned cause of the trouble given by the patient is unreliable owing to the perverted judgement. In such a case the relatives must be questioned in the effort to arrive at the actual cause of the trouble. Every patient who is admitted into an institution for the insane on a certificate, may safely be regarded as physically ill, although in some cases of mania or delusional insanity he may not feel so owing to his mental condition. Autopsies made upon patients who have died from some acute condition shortly after reception, have revealed in addition pathological changes of a chronic nature in some organ or organs of the body. In the very early stages of a "mental breakdown" there may be subjective symptoms in plenty, but as the condition progresses towards actual insanity, the fewer become the complaints, until when actual insanity is reached the patient may deny that there is anything physically the matter, although the mental complaints such as delusions of persecution may be in abundance. This may be a guidance in some cases to estimating the stage of the mental attack.

The onset of the physical ill health may have been so insidious that the friends have not noticed it and the various symptoms complained of by the patient may have been regarded as too trifling to worry about. Many men and women suffering from a nervous breakdown will acknowledge that it is years since they have had a holiday, although admitting that they could not treat their horses in the same way. Many women patients date their last holiday back to their honeymoon, sometimes ten years back. In spite of all efforts, it is sometimes impossible to discover the stress without some assistance from the relatives. It is well under those circumstances in the case of a married patient to interview both sides of the family and to interview both sides in camera and separately. Sometimes in this way information is gained which would never have been brought to the light otherwise. The worry associated with a psychical stress may be of such a private nature, such as the sexual relationship between man and wife, that a sensitive woman

would never disclose its nature unless questioned closely and tactfully. Many of these conjugal stresses have been the cause of untold unhappiness for many years to the unfortunates who play the principal parts in them. As an example of the indirect way in which a stress of this kind may act, it was decided on one occasion in consultation that the best way to treat the mental symptoms in a female patient was to send the husband for a long sea trip. Assuming that a provisional diagnosis of the responsible stress has been made, the next step is to consider the mental symptoms present with a view to ascertaining the variety of mental disease threatening. In the very early stage this may be difficult if not impossible owing to the lack of sufficient indications in the symptoms, but in the later stages some idea should be easily obtained. The presence of mental depression in or out of proportion to any assigned cause must be determined. The same decision must be made in regard to mental exaltation. Delusions, hallucinations and illusions, must be detected and noted and efforts made to trace the origin of these which are usually associated in some way with the patient's life experience. Are the delusions systematized or not systematized? Are the hallucinations auditory, visual, tactual *et cetera*? Make sure that they are actually false impressions. Many a patient is sent into a hospital for the insane on a certificate that states the presence of a delusion which upon proper investigation has turned out to be not a delusion but the truth. Make a note of the presence of any stupor or confusion. Test the memory for recent and remote events. Note any degree of incoherence, mental enfeeblement, divertibility and inaccessibility that may be present. If the insanity be of a degree and kind not dangerous to the patient or others, treatment may be carried out at home or in a private nursing home. A patient with insight into his mental condition may agree to become a voluntary boarder at the hospital for treatment of acute mental disease or at one of the private licensed houses. No fixed rules can be laid down for the treatment of the preinsane or those in the early stages of insanity. Conditions are never equal. The financial resources vary and the domestic arrangements at patients' homes differ. There is one rule which should never be broken and that is always regard a depressed patient as a potential suicide and take steps accordingly. The failure to appreciate this risk is responsible for nearly all the tragedies that happen in the treatment of insanity. If the circumstances in life are poor, a morbidly depressed patient should be certified to the hospital for patients suffering from acute mental disease, as the risk of self-destruction is very great. A wealthier melancholic should be certified to a private licensed house.

Wherever possible every effort should be made to avoid sending a patient to a State hospital for the insane. There are certain classes of patients who should be sent there without any unnecessary delay, such as a paranoiac, a general paralytic and certain violent maniacs, because the equipment of



the State mental hospitals for this class is superior to that in the private institutions. Treatment in a public hospital for insane (hospitals for patients with acute mental diseases and receiving houses exempted) is a social economical arrangement and not an hygienic problem, as it is not the individual who receives consideration so much as the community. Man requires a healthy environment, a mental cleanliness and mental health to combat mental disease. More than mere board and lodging are required for the proper treatment of the early and not hopelessly insane patient. It is well known that except for the idiots and patients suffering from general paralysis of the insane all other patients in a hospital for the insane recognize that the other patients are insane. This is contrary to the requirements of mental health and mental cleanliness for the combating of the mental disease already mentioned. Certainly some patients when received at a hospital for the insane for the first time, show a temporary improvement in symptoms, but these patients are usually just as bad after the stimulus of the new surroundings has subsided. This temporary improvement on reception is not seen on the occasion of a second attack. The rigid Government food allowance and the few medical officers in proportion to the number of patients, make the correct treatment of acute insanity in a hospital for insane impossible. The first requirement in the treatment of mental disease is rest. Cowper who was himself insane, says in "Retirement," line 623: "Absence of occupation is not rest." Guided by the statement of one who was speaking from personal experience, the practitioner in charge of the case cannot do better than give his patient occupation consistent with his physical state. If the physical condition necessitates bed treatment, the prospect is doubly unfavourable, because of the inability to exercise and the difficulty of keeping the patient's thoughts away from himself or herself and any worry. Massage must be used as a substitute for exercise in such cases. A physical stress which requires bed treatment, is frequently though not always a severe one and therefore a dangerous handicap upon the recuperative powers of the neurone. Bed treatment is required in very restless and maniacal patients who are wearing themselves out with overactivity and it is required in melancholic patients who are in a state of physical exhaustion. Both of these classes require rest, but when the physical health and condition are good, exercise and occupation are an essential to recovery. It is a good practice in most cases to impress upon the patient that his physical ill health is the cause of his mental condition. This assurance also gives the physician a better reason for attending a patient who either resents his presence or says that he does not feel ill physically and does not require a doctor. It is the unfamiliarity of the subjective symptoms and tone of feeling in insanity which annoys and worries an insane patient. As is the case in primitive races, it is the unfamiliar which frightens people. Patients often say "Oh, I know I am mad," because they realize that their thoughts

and behaviour are not those to which they are accustomed. But the strange thing is they may worry about everything else, such as the annoyance and purport of an auditory hallucination, but they do not worry about the fact that they are insane. Dryden says in the "Spanish Friar" perhaps with some degree of truth:

There is a pleasure sure in being mad  
Which none but madmen know.

Many patients can be helped by explaining to them that these symptoms which they realize they have, are due to physical causes, such as a climacteric reacting upon a person with a nervous temperament. In the treatment of all classes of insanity be frank and open with the patient, because if a mental patient detects any tendency to ignore his rights as an individual, he will lose all that feeling of *rapprochement* that had hitherto existed between the physician and himself. Patients are very quick to detect any attempt to deceive them and show their resentment very soon. In suspicious patients any hint of deceit is fatal to treatment. If the conditions are such as to permit treatment away from home, then the removal from past associations and the introduction to fresh scenes and interests are the best treatment. There is, however, a wide range between the safe patient who can be sent with a friend on the South Sea Island trip for six weeks and the doubtfully safe patient who can be sent to a nursing home under the constant care of nurses. To occupy the mind with thoughts quite foreign to the life the patient was leading prior to the breakdown, will act in the same manner as absence from a certain line of thought in the same makes forgetting easy. It is the lifelong dwelling upon one subject *plus* heredity and general ill health that make the paranoic view of life consist of only one interest, that is his feeling of aggrievement. All other thoughts occupy his mind so seldom that at last they become weakened in comparison with the persecutory delusion. "The mind is in fault which never escapes from itself" (Smart's Horace, Book I, Epi. 14).

For the wealthy the treatment of patients in the early stages is an easy matter, but it becomes progressively difficult when the families concerned vary from "ordinarily well off" to "just struggling along." When it approaches the level of the patients who attend psychiatric clinics, the condition is a lopsided one so far as correct treatment is concerned. At the clinic experienced alienists are in attendance, but unless provision is made for complete rest of the patient's mind, treatment is not complete. A psychiatric clinic therefore is not complete unless it has attached to it a rest home, where the individual can have a complete change of interests at a cost in keeping with the fees charged in the public hospitals for indoor treatment, that is, if the patient has no means to pay, payment is not exacted. This class of rest home is in existence at Lara for the treatment of male inebriates, where recreation, fresh air, good food and cheerful atmosphere cater for mind and body and produce excellent results. Keeping in mind the fact that the repair of the



chromatolysis will take place, provided the stress is removed and the neurone obtains the requisite nourishment, it remains for the physician to see that the patient's bodily health is placed on a satisfactory footing. Correct functioning of all organs and tissues must be helped. The bowels should be regulated, but not with purgative medicines which liquefy the contents of the large bowel and allow absorption of toxins. A large bowel with semi-liquid contents aggravates the symptoms in many insanities. One initial "clearing out" to make sure at the commencement should be followed by drugs or diet which produce a formed stool. If the initial purgative is not followed by regular bowel action, the prescribing of liquid paraffin, paraffin and agar, cascara and agar, very often keeps up a normal intestinal action. For very obstinate cases an enema of thirty cubic centimetres (one ounce) of glycerine may be necessary and in acute confusional conditions is preferable to a purgation which stirs up an abnormal putrid fermentation, capable of killing the patient by its toxic absorption before it is evacuated. The evidence of autopsies is in keeping with this theory.

No examination is complete if the urine has not been tested and the test made as extensive as circumstances will permit. It may indicate a physical stress, for example a patient at the hospital for patients with acute mental diseases at Royal Park gave excess of urobilin in the urine during routine examination and later on the autopsy revealed a malignant disease of the pancreas, although there was no suspicion of such prior to the examination of the urine. Should the patient's condition show no sign of any improvement after the manifest psychical and physical symptoms have been treated, the whole gamut of examinations of the blood, stomach contents, feces, spinal fluid *et cetera* should be employed. Search must be made for hidden septic tissues and if found treated surgically. Where a chronic infection is suspected, stock vaccines may give good results. In other countries transfusion of blood has improved mental symptoms shortly after the operation, but so far it has not been practised here, although there is reason to believe that in mental diseases of a curable type due to physical debility it should give equally good results, as it is reported to have done in the mental symptoms of pellagra.

Balneology which is extensively used in mental hospitals in Europe, is a useful adjunct, as there is a wide range of temperatures and of types of baths that can be given. It is not an uncommon thing in visiting a continental mental hospital to enter a room with several exalted patients having continuous baths, being in the baths for several hours at a time. The local idea of bathing is that its sole uses are for the cleanliness when necessary and for coolness in summer. Sun basking or bathing is much used on the continent of Europe for "nervous breakdown" cases with apparently good results. The periods of sleep must be sufficient and to encourage this exercise must be taken. Where exercise is out of the question, massage should be

ordered at regular intervals. In spite of all these efforts to induce sleep it may be necessary to use hypnotics. The safest of these and probably the most abominable to take is paraldehyde. The bromides and the combinations of bromides with *cannabis indica* and chloral hydrate, "Bromidia," veronal, "Aspirin" and opium are also useful in producing sleep. Sleeping in the open air provided the bed and bedding are warm and comfortable, is much better than sleeping in a closed room. Failure in the sleeping-out scheme is often due to the bed being a stretcher or some other kind of shakedown brought into requisition, because it is easy to drag out on to the verandah.

The feeding in mental diseases requires more attention than the textbooks indicate. The methods adopted therein are characterized more by the endeavours to feed the patient than by the study of the kind of food that is given. "Feed the patient up and use the stomach tube if the patient refuses food" are the instructions given. The textbooks claim that the condition of the tongue can be disregarded and is not a contraindication to the full feeding of patients. Autopsies made upon patients, tube fed twenty-four and more hours prior to death, show that no attempt at digestion has taken place in these cases, whereas autopsies made within a few hours after a meal in other classes of patient show that the food has all left the stomach. This is proof that in treating mental diseases there is no warranty to depart from the tenets of ordinary medicine and common sense in regard to the diet. In many cases the stress or one of the stresses of the mental breakdown was dyspepsia and there is nothing to be gained by filling a dyspeptic's dilated stomach with the much lauded so-called "ploughman's breakfast," consisting of a pint and a half of milk and several eggs, to give the patient eructations of hydrogen sulphide for the remainder of the twenty-four hours, yet this is practically what the teaching was until recently. As it is in other physical disease, so is the tongue in mental disease a guide to treatment and alimentation. In the feeding of patients who are definitely insane, the use of the stomach tube should be restricted to patients with anergic stupor who, deprived of volition, will not open the mouth and swallow food placed therein by spoon and also to certain other patients (fortunately, few) who refuse food more from actual "cussedness" than anything else. One exhibition of the tube in the latter class is usually quite sufficient to insure no trouble in the future. This *fastigium cibi* or disgust of food may be the indicator of the onset of a pneumonia, the presence of malignant disease of the alimentary tract or of an advanced silent tuberculosis of the lung. This silent tuberculosis of the lung is not uncommon in mental practice. There is a gradual wasting without cough and as examination is difficult owing to the indifference on the patient's part to requests to take deep breaths the condition is often attributed to the loss of flesh that accompanies many mental diseases.

Refusal of food by patients who are not controlled by delusions of poisoning or some other delusion

referable to the state of their insides, should be treated by purgative enemata. Patients who have died from insufflation pneumonia following a tube feeding performed because of persistent refusal to take food, manifest *post mortem* fecal impaction and this without doubt was the cause of the refusal to eat. When the refusal to eat has been treated by enemata and a purgative, similar patients have taken the food which they formerly rejected. When a female patient develops acute insanity it will be found that in a majority of the cases the onset of the active mental symptoms coincides with the onset of her menstrual period. Usually menstruation then ceases, to come on again when convalescence is well established. With a patient convalescent from melancholia it is always advisable to be on the guard against relapse and suicide with the first return of the menses and it should be made a rule not to let such a patient go home until she has menstruated once. Should a patient commence menstruation before her acute symptoms have subsided, the prognosis is not good.

If the practitioner has not been called in to see the patient until the condition of mental disturbance has gone past the early stage, the treatment will require the assistance of a special nurse or nurses. It is always advisable that the care of an insane patient should be undertaken by someone other than a member of the family. This is possible with the wealthy, but its degree of possibility in other families depends upon the finances at their disposal. When the patient is a club patient, the best procedure is to send him or her to the State hospital for acute mental diseases which is designed and staffed for patients considered as having a prospect of recovery under correct treatment. Should the patient be found to be of a hopeless type, the officials there will transfer him to one of the hospitals for the insane, but if the condition is a curable one he will be kept there. As all the hygienic surroundings at the hospital for acute mental diseases (with the exception of the company of other mental patients) are superior to the home from which the patient has come, everything is in favour of the change of environment. Wealthier families can have their relatives sent to nursing homes, if their behaviour is such that certification is not necessary or if certification is necessary on account of their behaviour, they can have them committed to a private licensed house. The treatment in the certified insane is the same as in those in the early stages, but with certain additions. Melancholic patients in private licensed houses should be constantly under observation as a protection against suicide, especially in the early part of the day, when the tendency to suicide is greater than at any other time and lethal weapons must be kept out of sight and under lock and key. The nurse should be cautioned not to leave such a patient alone for one second and in the case of a male patient not to allow him to shave himself except with a safety razor and then only with an attendant standing over him. The same strict caution must be observed with maniacal patients who should never be left

alone with one nurse. Patients with acute delirious mania cannot be nursed satisfactorily in any other than an institution fitted with a room padded to prevent injuries during motor restlessness. Such patients require two nurses, male or female (according to the sex of the patient) for day and two for night work. Specially trained nurses are required for mental patients. The trainee from a public hospital for general disease is not as a rule satisfactory, unless she has had special experience in mental nursing in addition. The obtaining of suitable male nurses is as a rule difficult, as the majority of men offering for these positions are usually men who have been gentlemen's valets or who are temporarily unemployed and have had very little experience in the care of mental patients. On the whole male nurses for these patients are an unsatisfactory lot and if possible without running any risks the nurses should be female. The nurse's uniform has a certain value of authority attached to it in the mind of most people including that of the patient and gives the nurse more control over him. The appearance of the male nurse for nursing mental patients is usually something between that of an undertaker, a waiter and a prison warder and in the ordinary clothing usually worn conveys no impression of authority. Patients suffering from systematized delusional insanity should be sent to a hospital for the insane unless the friends are wealthy, as they are incurable and in most cases potential homicides. Primary dementia patients run a slowly progressive course, but some of them occasionally become sufficiently stationary and quiescent to go back into the world for a time. In this type of insanity the friends should be informed that as a rule the condition is an incurable one, but if they like to keep the patient at a private licensed house, it might assist in making the disease stationary. Thyroid gland pushed to the production of thyroid toxæmia with the patient in bed has the reputation of having improved some patients with primary dementia. In all cases of insanity the practitioner should frankly tell the relatives of the high cost of private nursing in comparison with the cost of the State hospitals. Unfortunately this is not done in many cases and when the friends have uselessly spent all their money on a patient with an incurable condition, they eventually have to send him or her to a State institution. On account of the chronicity of the condition alternating insanity is a type of mental disease which will eat up an estate if the patient is sent to a private institution, unless the funds available are large. Unless the relatives have plenty of money, these patients should be sent to a State institution. The treatment is that of the mania or melancholia which for the time characterizes the disease.

In senile dementia if the physical health is feeble, the friends may prefer that the patient remains at home. Unless there is sufficient help in the family this should not be permitted, as these patients require considerable nursing attention to insure cleanliness. In male senile dementeds the use of the catheter at regular intervals is often essential, so

that the medical man will be well advised to have the patient brought into the village, if the patient is in a country district. Bed sores will appear overnight in these patients in spite of the best attention. As they are drowsy by day and restless and noisy at night, these senile patients require sleeping draughts which are conducive to hypostasis in the aged. There is always a liability in these cases to sudden death after the taking of an aperient.

Patients with senile mania and melancholia are treated similarly to those with mania and melancholia with special regard to the senile element.

The confusional psychoses or exhaustion psychoses are of several types and the acute type requires bed treatment, as the patients are seriously ill. A great number suffer from an acute toxæmia of unknown origin which has a high mortality. Another type has symptoms like the hebephrenic type of primary dementia, but with a good prognosis. Indeed it is doubtful if the condition of the few patients with primary dementia who recover, is not wrongly diagnosed exhaustion psychosis. Careful attention to food, sleep and bowels is the only line of treatment. Convalescence in the recoverable cases is prolonged long after the acute symptoms have subsided and on that account mental effort, such as writing and visits from friends, should be curtailed as much as possible.

Patients with volitional insanity usually require institutional treatment unless the friends have the money to pay for adequate control. The prognosis is unfavourable in these cases. These volitional insanities are frequently associated with abnormal sexual instinct. Destruction of property and pyromania appears to take on the character of a surrogate of the sexual gratification. In cases of window breaking and incendiaryism the patient should be examined for sexual peculiarities and also for evidence of paranoia, as these practices are common to both types of insanity. Some of the psychasthenia patients with obsessions improve with outdoor occupation, baths, good food and sleeping out, but for want of funds may eventually require to be sent to a State institution. Patients suffering from moral insanity are suitable for State institutions only.

When epilepsy is associated with insanity, treatment depends largely upon the type of mental symptoms present during, before and after the fit or in place of the fit. Impulsive violence must be guarded against and the automatic actions following *petit mal* must be explained to the friends to avoid awkward situations. Unless the funds available are large, these patients should be sent to a State institution. Dieting, regular action of the bowels, outdoor exercise and occupation without undue excitement give the best results when the patient is not having a bout of fits. When a bout of fits is in progress the treatment is a floor bed in a dark room, a strong purge and nothing by the mouth but water until the patient ceases to have fits. *Status epilepticus* is treated by hypodermic injections of morphine 0.01 gramme (one-sixth of a grain) every three hours, an enema containing 0.72 gramme

(twelve grains) of chloral hydrate or chloroform inhalation. Although sane epileptics respond to bromides, the insane epileptics are not benefited by that drug in the same way, as the dose to be given in order to be efficient must be so large that it gradually produces a state of chronic stupidity. Epileptics are gross eaters, so to prevent choking during a fit the food must be always given finely divided either by being cut up or ground up in a machine. It is advisable to give the evening meal early, so that the contents of the stomach have passed on to the intestine before the patient falls asleep. This obviates the risk of choking in a nocturnal fit from foodstuff vomited up and also saves the heart from being embarrassed by a full stomach should a fit happen when the patient is in bed.

As general paralysis of the insane is a hopeless condition, it depends upon the financial strength of the friends as to whether the patient is sent to a private licensed house or State institution. The treatment by the injection of malarial parasites is still in its probationary stage and treatment by anti-syphilitic drugs appears to do more harm than good. Constant supervision is necessary and the food should be finely divided, as these patients bolt their meals. Keeping the bowels regular seems to prevent congestive attacks. As dementia increases and the body movements become more clumsy, chair nursing is necessary, soon followed by the final stage of bed treatment.

Organic insanity or insanity with the grosser lesions shows a wide variation of symptoms. Some of the patients can easily be treated at home, while others are too dangerous or noisy for home treatment. They are all too irresponsible to be left alone, so require supervision night and day. Large tumours of the brain may exist and produce no symptoms to distinguish the patient's mental condition from any other kind of dementia. Some of the arteriopathic patients are very like those with slow dementing general paralysis of the insane. The only course of treatment is that of the symptoms, unless there are grounds to believe that there is a tumour. The majority of the cases of tumour are discovered for the first time at the autopsy.

The treatment of congenital mental deficiency depends upon whether the patient is idiot, imbecile or moron. Unless the friends have the available funds, the idiots and imbeciles should be sent to an idiot colony run by the State. With the mental defect of the lower grade idiot and imbecile there is generally combined some bodily defect which prevents procreation. Delinquencies amongst imbeciles do not happen much below the mental age of nine years, but as the scale of mental development is ascended, there are full maturity and possibilities for reproduction. Thus the morons become prostitutes, spreaders of venereal disease and tools of criminals (Singer and Krohn). In the interest of the State the medical man should advise sterility in these cases or permanent segregation in an institution.



Korsakow's syndrome calls for hospital treatment as a rule and can be nursed at home or at a private hospital. The treatment is that of the peripheral neuritis combined with general tonic measures.

In other insanities named after the exciting cause the treatment is that of the exciting cause and at the same time that of the mental symptoms, as they arise, on the lines laid down in the foregoing conditions.

#### Treatment of Special States.

Ordinary degrees of mental excitement require little treatment, but if the patient does not respond to a few soothing words from the nurse and the correction of any irritating cause, the nurse should in company with another or more nurses place the patient in a room where no damage can be done. A 0.3 gramme (five grain) dose of calomel should be given and the patient put to bed. Should the excitement increase still further and the patient become very noisy and violent, a hypodermic injection of hyoscin hydrobromide 0.0006 gramme (grain one-hundredth), morphine sulphate 0.016 (grain one-quarter) and atropine sulphate 0.0004 gramme (grain one-hundred and fiftieth) should be given and the patient covered over with a warm blanket.

In the State institutions a specially padded room is used for this class of patient and also for the restless senile maniacs who are liable to fall about and harm themselves. Mattresses on the floor make a substitute for a padded room in an emergency. Destruction of clothing can be prevented by putting a strong linen combination garment over extra underclothing. When patients are dirty at night-time and smear themselves and the bedding with excreta, a glycerine enema should be given at bed time. This will to a great extent prevent the trouble by cutting off the supply of material.

Sleeplessness should be treated by foot baths before bed, hot drinks at bed time and alteration in the position of the bed or by granting any other reasonable request made by the patient before recourse is had to medicinal treatment. The choice of sleep-producing drugs is large and certain of them may be specially indicated at times. If there is bodily discomfort opium may be indicated. "Aspirin" is nowadays given with good results in many instances where formerly other drugs were employed. The bromides are useful in nerve excitement and in those cases in which sleeping draughts have to be repeated frequently, paraldehyde is suitable, because its nauseous taste militates against drug habit, although a paraldehyde drug habit is not unknown. Profuse bronchorrhœa is the striking physical sign in paraldehydism and mental confusion of all grades accompanies it. The drug is a safe one in cardiac weakness as its action is that of a cardiac stimulant. It may be given in doses of up to fifteen cubic centimetres (four fluid drachms) to patients threatening *delirium tremens*, but four cubic centimetres are often sufficient as a sleeping draught in ordinary cases. Paraldehyde has another use not generally known. It has been given by the mouth where it was impossible to administer a

general anæsthetic in order to reduce an extensive dislocation of the shoulder joint. The patient was a powerful epileptic in a dangerous state of excitement who was unapproachable, but who still retained the inordinate epileptic love of medicines and took a large flavoured draught of paraldehyde without much persuasion. The muscle relaxation was perfect and the patient was well strapped and bandaged before he awoke none the worse for the anæsthetic.

Veronal, chloral, sulphonal *et cetera* all have their use, but must be given to patients with more caution. Sulphonal given for motor restlessness has a risk attached to it, unless care is taken to keep the bowels regulated to avoid the cumulative action which occurs otherwise. Patients taking this drug for any length of time should not be exposed to the rays of the sun owing to the production of porphyrin which renders the skin sensitive to light.

Acute depression must be treated in bed and no attempt made to cheer the patient up, but rather to stress the idea that the depression is due to a definite physical cause which is being treated. To this end tonics are administered and the food should be of an easily digested nature. Opium is of use in some of these cases as it seems to dull the mental pain. Absolute constipation is the rule in mental depression, but glycerine enemata do not add to the patient's depression as do aperients which produce a liquid stool.

Persistent spitting about the room may be due to a nauseous taste, to a delusion of poisoning, hallucinations of smell and taste or to salivation which some forms of gastritis produce. Try and ascertain the cause of the spitting and treat it if possible. In the meantime spread sheets of waterproof sheeting on the floor and use waterproof batiste in lieu of a top bed cover.

Faulty habits are treated by enforcing regular visits to the latrine, but as the patient may deliberately refrain from the necessary cooperation in the scheme, a glycerine enema will bring about the desired result by causing urination. Senile patients may require regular catheterization.

Masturbation is a symptom in mental disease. Local applications should be avoided. Manual labour, cold shower baths and interesting recreation to divert the attention are the best lines of treatment. This class of patient should never be left without interesting occupation. Authors of textbooks advise a hard mattress and pillow, but as these are likely to keep patients awake at night by their discomfort, they are more likely to conduce to the practice. A comfortable bed with a paraldehyde draught to produce immediate sleep and early rising as soon as the patient is awake, are more rational as a means of preventing the practice during the night. Thread worms, lack of cleanliness in the erotogenic regions, phymosis or hæmorrhoids may in some cases be a factor in the commencement of the practice, but the egocentric mind and solitary habits of the insane weigh more in the causes of the condition.

Persistent removing of clothing may require combination garments laced up the back over warm underclothing. The only way to prevent destructiveness of clothing is to keep things away from the patient. Sometimes old garments are given to the patient to tear up when the destructiveness is due to motor restlessness.

Self-mutilation usually indicates a bad prognosis. Sometimes it is the result of an hallucination or delusion, as for example the idea that his generative organs are responsible for some sexual lapse, urges a patient to cut them off. This is effected with the crudest implements and apparently without pain. Picking at the skin, pulling out the hair, inserting foreign bodies into the orifices of the body and eating rubbish, stones *et cetera* are often hard to explain. The wearing of leather gloves of the boxing glove type prevents picking.

Hoarding of rubbish is seen in epileptic idiots, a habit which distinguishes them from the other idiots as a class. It is also seen in insane conditions in which the retrograde dementia has reached the stage of the mind of the boy of ten years with the craze for collecting stamps, cherry stones *et cetera*. Stoddart draws attention to the interesting fact that a progressively dementing man such as a general paralytic gradually passes through the mental phases in the reverse order to which he acquired them, for example a general paralytic at first spends money recklessly. (Stoddart considers the spending of money to be instinctive at first.) This is followed by exaggeration of the sexual instinct. Then the boastfulness and conceit of adolescence appear, followed by the instinct characteristic of puberty, to eat everything upon which he can lay his hands. The instinct to collect belongs to the age of ten and at six the destructive age is reached when the small boy takes clocks to pieces. The last stage of the general paralytic resembles the infant lying in bed, wet and dirty and putting into his mouth anything, such as the corner of the sheet, that accidentally comes in contact with his straying hands.

Rubbish eating is quite a common occurrence among the insane. Some women eat their own hair which form ægagropiles or hair balls in the stomach. Stones, leaves, clothing *et cetera* are eaten by demented patients and some patients eat fæces and drink urine. This coprophagia has its analogue in the taking of the fæces of different animals and humans as medicine, which was a form of treatment a few centuries ago. Even at this present day there are sane men in outlying sheep runs who take sheep droppings as pills. There is also another reason for this symptom and that is related to the forms of self-abnegation practised in mediæval times by religious ascetics as penance for their sins. It is going one better than the relatively more pleasant scheme of going in sackcloth and throwing ashes on the head.

#### Prognosis.

The factors determining the prognosis in insanity are of a dual character. Both the physical and the mental aspects have to be considered. The restora-

tion of either the mental or physical health alone is of no value. For a happy result both the mental and physical health must be restored. The course of the shortest attack of insanity runs into several months. As a rule the prospect of mental recovery becomes more remote with every month after three years' duration of mental symptoms, although isolated patients have recovered after an attack lasting seven years or longer. Sometimes physical recovery is complete, but mental recovery is only partial. Sudden recoveries in insanity belong to the realm of the novelist. Except for a patient suffering from unrecognized ambulatory automatism who was certified as insane on two occasions, because through his loss of memory for a certain period in his life he thought he was living in the reign of Queen Victoria, there is no record in the Victorian Lunacy Department of any insane patient recovering suddenly. The prognosis in mental attacks depends upon the nature of the stress, the type of insanity present, the degree of heredity present and the manner in which the patient's physical and mental health respond to treatment. For instance, an insanity due to the stress of the climacteric, a general paralytic or a member of a family in which there are more than one of the brothers and sisters insane promises a bad prognosis. On the other hand, for a patient with simple melancholia with no strong family heredity and showing some improvement in physical and mental symptoms in response to treatment a good prognosis is justified. As regards the influence of heredity upon prognosis Clouston says:

The effect of a strong and direct hereditary predisposition is not, as is commonly believed, sufficient to lessen the chances of recovery, especially in the first attack. On the contrary hereditary cases are often very curable, but relapses are more probable. A brain so disposed is more readily upset by slight causes.

This is another way of saying that a brain with a low "flash" is easily upset by a slight stress which, being easily treated, allows the brain to recover again. Should the same brain meet with a stress which acts with a severity causing a long attack, the probabilities are that the brain will not recover.

As in physical diseases unassociated with any insanity, there is often in insanity an unknown factor which seems to sway the prognosis. Some sane patients with everything apparently in their favour succumb to a physical illness and some with everything against them get better in spite of the bad prognosis. This sometimes occurs in the practice of insanity. There are, however, certain signs which experience has taught those familiar with insanity to regard as unfavourable to a happy termination. Progressive mental deterioration showing no response to treatment is bad. The putting on of fat without improvement in mental symptoms is unfavourable. If any delusions or hallucinations show a tendency to become fixed, the prognosis is bad. Sleeplessness, refusing food, picking of the skin, trophic changes of any kind, progressive loss of weight, loss of memory for all periods and any reversion to the mental phases of a younger age are all unfavourable. The restoration of sleep and appetite with good bowel action, asso-

ciated with improvement in the mental symptoms indicate a good prognosis. Restoration of bodily functions without corresponding improvement in the mental symptoms is on the contrary a bad outlook. If there are gross organic changes in the organs and tissues of the body which are refractory to treatment, the outlook of mental improvement is bad. Youth and rapidity of onset as a rule are favourable to a good recovery and, on the other hand, old age and gradual onset are unfavourable. When the whole of the patient's mind is taken up by sexual delusions or dominated by sexual ideas the prognosis is bad and when there is an over-activity of the primitive organic instincts, such as eating, drinking, sexual desire *et cetera*, the prognosis is bad. It may be taken as a guide that when all the instincts together are altered, the prognosis is unfavourable, as the patient's mind has then reached a degree of degeneration from which there is usually no recovery. As in physical illness in the sane, a general improvement in appearance, dress, habits and speech is a good sign. All cases must be considered in the light of the aetiological factor responsible for the mental symptoms and with due regard to the type of the symptoms present.

It is not wise to give a prognosis to the friends unless it is requested. The exception of this rule is when the patient belongs to those types of insanity which are hopeless from the beginning from the nature of the causative agent. To a certain extent the medical practitioner is saved giving a prognosis by the habit of the friends asking how the patient is. It is the Master in Lunacy's office with its cold legal precision which demands the information whether the patient will recover or not and how long it will take him to do so.

This concludes the Beattie Smith Lectures on insanity for the year 1925.

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#### THE RELATION OF DENTISTRY TO MEDICINE.<sup>1</sup>

By H. T. J. EDWARDS, D.D.Sc. (Adelaide),  
 Adelaide.

I WOULD first like to express my own personal satisfaction that this joint meeting has eventuated. Meetings such as these have become regular features of medical and dental society programmes in other parts of the world and I feel sure they must be productive of nothing but good to all concerned and the public in general.

When the responsibility of presenting a paper was thrown on me, I must confess I was at a loss to know what to speak about. I am not desirous of entering into any dental problems from the technical standpoint, but rather prefer to try and stimulate the sympathetic cooperation of the medical profession in the work dentistry is endeavouring to accomplish for the community.

I realized that very little could be done in the time available in one evening and therefore I hope that this meeting is only the forerunner of many in which attempts will be made to deal with problems of common importance to both professions.

I would like to make a few remarks concerning the past and present status of dentistry. At the moment dentistry is organized as a profession quite distinct from that of medicine. In some respects this is unfortunate, in others it is one of the best things that could have happened. The abnormalities and diseases of such parts of the body as the eye, ear, nose or throat, are everywhere included in the practice of conventional medicine and each is the primary concern of an important specialized branch. In most countries the disorders of the teeth have been allotted to dentistry which has been organized and now legally defined as a division of the healing art, intrinsically different from that of a specialty in medicine. I believe, however, that Italy has recently adopted new dental laws, making it necessary for dental practitioners to hold both medical and dental qualifications. In my opinion this will have no other effect except that of increasing the cost of dental service—a result to be avoided if possible.

The teeth and the adjacent tissues are the only parts of the body that are singled out for remedial treatment by other than medical practitioners. This exceptional position of dentistry compared with the accredited specialties of medical practice has developed from an early recognition of the unusually large proportion of direct manual labour and the high degree of digital skill required in almost every operation on the teeth. The development of dentistry along its own path, so to speak, was due also in a large measure to the mistaken opinions among physicians generally that disorders of the teeth were wholly local and their influence on the general health was negligible or at the most unimportant. These erroneous beliefs were promoted originally by physicians and were fostered by general misunderstanding of the significance of early medical observations that teeth were almost wholly devoid of the capacity of self repair; that dental disorders were not curable by drugs, but remedied by mechanical means only and that diseased or healthy teeth could be extracted or broken off without serious and lasting effects on the jaws or on the welfare of the body as a whole.

The concurrence of these supposed conditions of incapacity for self repair, of incurability by medicinal treatment, of recovery from the effects of total loss, of the functional restoration attainable by artificial substitution which do not apply collectively to any other part of the body that is

<sup>1</sup> Read at a meeting of the South Australian Branch of the British Medical Association on November 26, 1925.



supplied with blood and nerves, seemed to justify in the judgement of the physicians in the middle of last century medical indifference to the teeth and to dentistry.

Under such conditions of neglect and indifference the work of repairing and removing teeth or the fitting of substitutes was considered as having about as much relation to medical practice as the tonsoring of the barber for instance. For the relief of toothache a tooth was extracted or broken off as luck or manipulative experience determined; strength was about the only operative requirement.

All but a very few physicians refrained from giving dental service and so all occupations from jewellers to wigmakers and itinerant Jacks-of-all-trades became the numerous practitioners of dentistry. This indifference is no longer present to any extent, but its presence at that time has left lasting effects on the status of dentistry, both socially and on the professional attainments of a percentage of its practitioners. As a result of unfounded assumptions and such misapprehensions of the import of dental disorders by physicians for centuries medicine gave little attention to the health of the teeth. Although the advance of civilization had been accompanied by an accentuation of dental abnormalities, medical practitioners shared the popular belief that decay of the teeth was unpreventable and their loss unavoidable; and so helped to bring about this universal resignation to the scourge.

A few doctors of medicine cooperated with some of the more progressive dentists of the time to rescue dentistry, if possible, from the degraded rut. They endeavoured unsuccessfully to establish instruction in dentistry in medical schools. This proposal was rejected by one of the leading medical faculties in the United States of America with the decisive comment that dentistry was not of sufficient importance to be included in the subjects of instruction in a medical school. For this reason schools and colleges of dentistry were established. The first University to include among its faculties one of dentistry was that of Harvard. It is of interest to note in passing that Oliver Wendell Holmes was then instructor in anatomy and physiology in that faculty.

The advisability of teaching the medical sciences to dental students has always been recognized, although it is only recently that this instruction has been at all thoroughly carried out. The standard of medical instruction, although probably much higher in British and Australian dental schools than elsewhere, is still much too low to impart to dentistry the character of a specialty in medicine.

This is not the dentist's aim. The educated dentist of today feels that the greatest good can come only if the two professions cooperate to such an extent that the condition of each patient becomes not a problem of dentistry or one in medicine, but one in which both factors are taken into account conjointly. A striking example of the recognition of the importance of the dental aspect of a case is

shown by the significance attached thereto in the systematic work of the Mayo clinic.

I was asked to include in this evening's remarks some suggestions for ways in which we as dentists felt that the medical profession could be of most assistance to us. This is easy. It is the children who are in the greatest need of dental instruction. The family physician comes in contact with children and their parents more frequently than the dentist and under circumstances which would make his advice carry considerable weight.

I would like to draw your attention to the prevalence of irregular teeth. It is unnecessary for me to stress the effects of development of the child and its physical well being of under-developed jaws and malocclusion. It is in the prevention of this condition that the medical profession can be of great assistance to us. When the temporary teeth have erupted they are regularly placed and the anterior teeth in fairly close apposition. As the child grows older, you probably have observed that the growth of the jaws causes spaces to appear between the teeth. These spaces are necessary in order to accommodate the greater width of the permanent teeth and constitute one of the most valuable signs of correct development. Children in whom these spaces have developed normally, are usually well developed in other respects. Absence of developmental spaces in a child of four years is almost a sure sign of dental trouble to follow and the medical adviser would be conferring a lasting benefit on the child by calling in the services of a dentist in order that steps may be taken to stimulate jaw development.

Other potent factors in the causation of malocclusion are (i.) prolonged retention of deciduous teeth, (ii.) too early and unnecessary removal of deciduous teeth.

Advice to parents relative to the normal eruption and loss of teeth and the tremendous importance of fostering and conserving a healthy and functioning deciduous dentition would constitute a great help to the conscientious endeavours of the dentist.

One not infrequently hears of patients having been advised by the insagacious opinion that they obviously have "soft" or "chalky" teeth which are not worth bothering about and might as well be all extracted. Many such instances reveal a most unpardonable lack of faith in the conservative skill of the dentist.

Then there is the matter of dental foci of infection; this is probably of greatest interest to us all just at present. The fact that apical and gingival infections do act as primary foci in secondary infections of distant parts is quite established. The problem of the dentist is "How is this infection to be removed?" The doctor's advice is usually, "Have your teeth out." But dentists whose training has been along conservative lines, feel that such radical steps are in many cases avoidable. They feel that many of these dental infections can be eliminated by medication or by surgical removal of infected root ends, pus pockets *et cetera*.

I have heard on good authority of a case in which a patient suffering from gastric symptoms was advised after a cursory examination of his mouth to have all his teeth extracted. This patient was wearing a complete artificial denture.

Personally, I feel that too many teeth are lost under circumstances such as these. Many of the dentists who are registered and practising, have not had the advantage of education in these matters and teeth are sacrificed at the mere suggestion of the medical adviser. I feel that in all cases, before a decision is made to annihilate the masticatory apparatus of any unfortunate, every other possible focus should be excluded.

In conclusion allow me to thank you for the opportunity of speaking before you tonight, also to express the hope that these meetings will become at least annual events.

#### DENTAL RADIOGRAPHY.<sup>1</sup>

By H. C. NORR, M.B., B.S. (Adel.), D.M.R.E. (Cantab.),  
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I PROPOSE to limit my share in this discussion as far as possible to a consideration of the radiographic appearances produced by various pathological conditions associated with the teeth.

Before attempting to interpret pathological states in X ray work, it is essential to have a clear conception of the normal appearances; therefore I shall crave your indulgence to allow me to recount briefly the normal anatomical and histological points that are pertinent to the discussion.

#### Dental Anatomy and Histology.

A tooth is anatomically divided into a crown, a neck and one or more roots enclosing a pulp cavity and root canals.

The main mass of the tooth is composed of dentine, made up mostly of carbonate and phosphate of calcium and magnesium, some organic material and water; the dentine of the crown is covered with a thin layer of enamel, composed entirely of lime salts and a little water; the dentine of the root is covered with a thin deposit of true bone called the *crusta petrosa* or *cementum*. Radiographically these structures are indistinguishable one from another, it is not possible to determine where the dentine ends and the enamel or *cementum* begins.

The pulp cavity and root canals, containing connective tissue, blood vessels and nerves, are comparatively transparent to the rays and therefore their size and extent show up readily on the radiogram.

The root of a tooth is imbedded in the jaw in a socket or alveolus which under normal conditions is accurately moulded to the root, but is separated from it by a completely investing layer of connective tissue called the alveolar periosteum, periodontium,

peridental membrane *et cetera*. This structure is very transparent to the rays in striking contrast to the density of the *cementum* and dentine on the one side and the thin layer of compact bone lining the socket on the other. It is, moreover, a most important structure from an X ray point of view, as it is in this region that the first radiographic manifestations of periapical disease become evident.

Surrounding the thin layer of compact bone lining the alveolus is the reticulated cancellous tissue of the jaw.

In addition to avoid making mistakes in interpretation, it is necessary to know of the existence of certain other normal structures, cavities, canals, bony prominences *et cetera*, in the vicinity and to recognize their radiographic appearances.

In short, these are the posterior palatine canal in relation to the posterior molars, the malar process of the superior maxilla and the maxillary antrum in relation to the molars and premolars, the floor of the nose and anterior palatine canal in the incisor region in the upper jaw, the inferior dental canal traversing the apical region of the molars and the mental foramen in relation to the premolar roots in the upper jaw.

#### Dental Pathology.

It is now appropriate to consider the various morbid conditions in connexion with the teeth in which the X rays are an aid or an essential in the diagnosis.

First and foremost comes the question of infection and in this respect it must be understood that the radiographic interpretation depends on the changes in density brought about in the tissues by the inflammatory process. These changes are either in the form of localized absorption or deposition of lime salts producing increased or decreased radio-translucency respectively and they invariably accompany an inflammatory condition in bone. It will be readily understood, of course, that the rays are of no avail in detecting an early acute infection of the periodontium before the above changes begin to occur.

There are two main types of peridental infection with possibly a third, depending mainly on the avenue of infection.

#### Periapical Disease.

In periapical disease the infective organisms gain access to the periapical tissues of a carious or infected tooth by way of the root canal or the infection may start from the gum margin, be deposited in the blood stream or occur as an extension from a neighbouring diseased tooth.

The first typical change noticeable on the X ray film is a widening and blurring of the normally thin sharp line surrounding the root of the tooth, representing a swelling of the periodontium with absorption of the adjacent *cementum* or alveolar lining. As the infection breaks through the latter, the adjacent cancellous tissue becomes rarefied and eventually destroyed, being replaced by pus or infected granulation tissue according to the virulence of the infec-

<sup>1</sup> Read at a meeting of the South Australian Branch of the British Medical Association on November 26, 1925.

tion. In the former case an abscess is the result, in the latter a granuloma. The process may subsequently be limited by a layer of dense bone and cyst formation occur.

The root of the tooth may be progressively eroded or absorbed or a more chronic inflammatory process may cause an increased deposition of *cementum* and result in a condition of hypercementosis with bulbous expansion of the root.

All these changes are readily discernible and distinguishable on the X ray film though often absolutely hidden to clinical dental investigation and it is then that an X ray examination is essential to determine the presence of such morbid changes, their extent and character and the teeth actually involved.

#### *Pyorrhæa Alveolaris.*

In *pyorrhæa alveolaris* the infection starts as a gingivitis round the neck of the tooth and gradually spreads down to the apex.

In this case the first radiographic change noticeable is as before a thickening of the periodontal membrane with very soon an absorption of the free alveolar margin and interdental septa. The latter change is frequently well advanced before the infective process eventually reaches the apical region of the tooth and it is thus that a tooth may remain vital, though surrounded by a well established pyorrhæal infection.

Though the presence of *pyorrhæa alveolaris* can be diagnosed readily without the use of X rays, the latter are of real value in determining the extent of the bone destruction, the presence of obscure pockets and the response to treatment.

It is a fact, well established now, that either of these chronic periodental infections may give rise to a great variety of acute and chronic inflammatory processes in other parts of the body.

With regard to the first group mentioned above, a chronic periapical abscess or granuloma may exist for years as a secret toxin factory, discharging a continuous flow of poison into the system, without there being any clinical evidence as to its locality. The finding of a devitalized tooth is no indication of the condition of the surrounding tissues, they may or may not be infected. In such cases the only means of proving the presence of and localizing the trouble is by radiographic examination.

In the second variety of periodental infection, namely *pyorrhæa alveolaris*, the disease process begins at the surface and, though much of the bacterial poison manufactured passes into the mouth to be swallowed and absorbed by or produce inflammatory lesions in the gastro-intestinal tract, a great deal of it is pocketed as the disease extends and is absorbed direct into the circulation as in the true periapical infection.

#### *Hypercementosis.*

There is a third variety of periodental infection, occurring in an otherwise healthy and vital tooth and producing a condition of hypercementosis without obvious X ray changes in the periodontium or

socket, beyond an enlargement of the latter to accommodate the expanding root.

It seems to me unlikely that this condition can act as a focus of systemic infection; it is apparently due to some cause stimulating the periodontium to an over-production of *cementum* and is possibly a specific manifestation. I do not remember having seen this view expressed elsewhere, but it seems to me to be a very probable supposition, arguing on the analogy of syphilitic subperiosteal nodes occurring in connexion with bone.

#### Dental Conditions Calling for Radiography.

Having discussed the use of the X rays for the detection of these infective processes in relation to general medicine, I trust it will be of interest if I illustrate a variety of conditions in which the rays are a necessary aid to the dental profession.

In both periapical infection and pyorrhæa it is necessary for the dentist to know exactly the teeth affected and the extent of the infection before deciding on conservative treatment or extraction.

Also it is necessary to have information as to the condition of the periapical tissues prior to filling or crowning a tooth with an infected pulp.

Again, the rays should be used to check the final result, to see that the filling completely occupies the root canal and does not project into the periapical tissues.

Similarly it is necessary before bridging a gap to ascertain that the teeth to support the bridge are healthy and that there are no infected stumps in the intervening alveolar margin of the jaw.

For the detection of retained roots, infected or otherwise, it is essential to call in the aid of the rays. The same may be said of impacted or unerupted teeth, fractured roots, foreign bodies, sequestra, cysts *et cetera*.

#### Conclusion.

In this paper, I have attempted to give a reasonably concise account of the application of radiography to dental pathology and to impress upon you the important in fact the essential part that X rays play in the diagnosis of pathological conditions of the teeth and jaws. I hope I have succeeded at least in the latter.

### Reports of Cases.

#### HÆMATURIA IN THE NEW-BORN CHILD.

By NORMAN DALE, M.B., B.S. (Melbourne),  
Hamilton, Victoria.

THE following case of hæmorrhage in the new-born child is of interest on account of the unusual site of the hæmorrhage.

Baby J., a boy, weighing 3.1 kilograms (seven pounds), was born on July 12, 1925, after an easy and unassisted labour.

Three days later, that is on July 15, 1925, small blood clots and blood stained urine were noticed on several



of the napkins and blood was also noticed at the urinary meatus. The child was quiet and apparently in no pain. Examination revealed no abnormality with the exception of a moderate jaundice.

Five cubic centimetres of maternal whole blood were injected into the child's buttock with the result that there was a diminution of the amount of blood in the urine for about twelve hours.

On account of a recurrence of hæmaturia on the following day 0.3 cubic centimetres (five minims) of "Hæmoplastin" (Parke, Davis & Co.) were given.

The urine then gradually cleared and by the end of thirty-six hours was quite clear and remained so up to the time the child was discharged on the twenty-first day.

During the duration of the hæmaturia the infant manifested no signs or symptoms of renal colic and was in good condition throughout.

One other interesting feature was the presence of small subungual hæmorrhages on four of the fingers of the left hand.

The family history was apparently clear, there being one other child, aged five years, who was said to be healthy. No history of hæmophilic tendencies was obtained. The mother had not suffered from miscarriages.

A Wassermann test of the mother's blood yielded no reaction.

## Reviews.

### ASTHMA, HAY FEVER, URTICARIA.

In his book entitled "Allergy, Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction," Dr. W. Duke has described much of clinical as well as of academic interest.<sup>1</sup>

He divides his subject matter into two sections. The first and by far the larger deals with hypersensitiveness to material or chemical agents, while the latter part describes hypersensitiveness due to physical causes.

The earlier chapters are devoted to a useful discussion of the experimental basis of anaphylaxis. In these Dr. Duke who is a clinician, freely quotes from textbooks by authors conversant with the experimental aspect of immunology. Emphasis is laid upon pollen as a cause of hay fever and asthma and the relation of continuous pollen irritation to the development of nasal polypi is discussed. Pollen irritation in and around Kansas City is largely caused by varieties of ragweed—members of the natural order *Compositæ*—which pollinate in the autumn. In Australia the maximum incidence of hay fever is in the spring and is due mainly to the pollen of grasses (*Gramineæ*) and capeweed (*Compositæ*). Dr. Duke draws attention to bacterial infection occurring as a secondary phenomenon in the congested mucous membrane of the nose and accessory nasal sinuses.

This cannot be too strongly emphasized, as so frequently the history of a patient reveals firstly some years of seasonal hay fever, then season asthma and finally as bacterial infection occurs in the engorged mucous membrane, chronic sinusitis accompanied by perennial asthma.

Hence the importance of preventing this series of events by thorough treatment of the primary condition, that is sensitization to pollen. In diagnosis of allergic conditions, Dr. Duke rightly regards skin tests—cutaneous or scratch and intracutaneous—as only one link in the chain of evidence. The intracutaneous method, while revealing slighter degrees of sensitization, has some element of risk and frequently gives positive results with proteins which are not the cause of the patient's symptoms.

Avoidance of the causative factor is suggested when practicable, but specific protein treatment is recommended

particularly in cases of pollen sensitization. The author apparently has had considerable success with an intensive method of treatment in which two injections of pollen extract are given per day for about two weeks and as the doses become stronger, the interval is gradually increased.

In the first part of the book statements are made which are surely unsound. For example, it is difficult to see on what biochemical grounds credence could be given to the story that a patient sensitized to hen's egg was also sensitized to hen's flesh owing to the presence of "egg in hen's meat" and not to rooster flesh.

The second section of the book deals with many problems which require further investigation. While such a condition as *urticaria solaris* may occur as a result of the specific action of sunlight on the human body, surely many of the cases described as "reflex-like reactions" are instances of simple reflexes affecting the autonomic nervous system, a system which no doubt varies in sensitiveness in different individuals.

The experimental failures described on page 296 could have been avoided, had it been realized that there is a protein present in frog's muscle which coagulates in the vicinity of 40° C. The book may be read with profit by those interested in the subject and a comprehensive bibliography will enable the reader to refer to original articles.

### DYSPEPSIA.

Dr. ROBERT HUTCHISON's book is a collection of a series of lectures which contain an excellent summary of the present knowledge of the complex subject of dyspepsia. The arrangement has a slight disadvantage in that it leads to some overlapping, but the lectures contain a wealth of material which will assist the general practitioner in particular to correlate his knowledge of the diagnosis and treatment of gastric disorders. The first chapter deals with "The Clinical Investigation of Dyspepsia" and the author is emphatic in his opinion that the interrogation of the patient is of more importance than the physical examination and that in the essential distinction between organic and functional disease pain, vomiting and wasting are the cardinal symptoms.

The entire second chapter is devoted to "The Diagnostic Significance of Abdominal Pain" and the value of this chapter is hard to overestimate. The author divides abdominal pain into two classes. The first includes pain referred to the abdomen from extraabdominal causes, such as pleurisy, spinal caries, fibrositis, *herpes zoster*, the gastric crises of tabes and hernia. The second comprises pain of intraabdominal origin. He subdivides the second group according to its character and duration.

In the chapter on the functional dyspepsias emphasis is laid on the fact that functional dyspepsia is in the great majority of cases primarily a disorder of the nervous system.

The organic disorders, carcinoma, acute and chronic ulcer, gastroparesis, organic dilatation are dealt with at some length and along the usual lines.

Chronic gastritis is included in this category and a clear account is given of a condition not generally well recognized. Chill and irritation of the mucous coat from unsuitable food are regarded as the main causes.

The chapters on chronic diarrhoea, mucous colitis and constipation (distinction being made between colonic constipation and dyschezia) are very helpful and the author concludes his excellent work with an account of what he terms loosely "the chronic abdomen," the despair of every physician. He refers in the words of Crabbe to the patients:

"Who with sad prayers the weary doctor tease  
To name the nameless ever new disease."

<sup>1</sup> "Allergy, Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction," by William W. Duke, Ph.B., M.D.; 1925. St. Louis: The C. V. Mosby Company. Royal 8vo., pp. 339. Price: \$5.50.

"Lectures on Dyspepsia," by Robert Hutchison, M.D. F.R.C.P.; 1925. London: Edward Arnold & Company. Crown 8vo., pp. 176. Price: 5s. net.

## The Medical Journal of Australia

SATURDAY, APRIL 3, 1926.

### The Attack on Infective Disease.

PREVENTIBLE infective disease can be attacked with a reasonable prospect of success provided that the health authorities are well organized and properly equipped with legislative powers, provided that sufficient information has been collected concerning the ætiology and epidemiology of the individual diseases and of the particular circumstances of the outbreaks and provided that the whole medical profession is prepared to carry out the plan based on established data and adopted by the chief health authority. In considering the question of the infective diseases the Royal Commissioners on Health employ a very convenient sequence. They are satisfied that of the more dangerous infections variola, plague and cholera demand first attention. Variola can be stamped out when it is endemic by careful control and adequate vaccination. It can be prevented in a country free from infection by vaccination and revaccination. In Australia the views of persons not competent to form opinions are permitted to be set against those of the world's highest authorities. If it were a question merely of the safety of the individual, it might be reasonable to allow any objector to refuse protection and to take the risk. But laxness in regard to vaccination on the part of a substantial section of the population endangers the whole community. Moreover heterodoxy is infectious; a few faddists can pervert a large number of persons who have but the haziest conception of the nature of infection and immunity.

The next group of diseases mentioned is the enteric. It is stated that health administration has reached a high state of development in the control of water supplies and the inspection of milk. Enteric fever and its congeners can be prevented by effective sanitary measures combined with proper disinfection of the excreta of persons suffering from the intestinal infection. It is obvious that the prevention of these diseases must present difficulties of a formidable nature in sparsely populated

country districts. We learn from an appendix attached to the Commissioners' report that in the districts bordering on the Murray and the Goulburn rivers the death rates vary between 0.35 and 9.65 per thousand of population. The death rate from enteric fever for the whole of the Commonwealth in 1924 was 3.8 per 100,000, that is 0.038 per thousand. It has receded from 14.8 per 100,000 in 1910. In 1909 it was 6 in England and Wales and in 1923 it was 2 per 100,000.

These figures suggest that while much can be achieved by the introduction of water-borne sewerage systems and a controlled water supply, the exercise of the utmost care in tracing every source of infection and in rendering it harmless is needed before a mastery can be obtained over the disease. It is not to the credit of Australia at the present time to have to admit that the suburbs of its largest city, a city of a million inhabitants, are still without a sewerage system and that in the unsewered districts septic tanks of varying degrees of efficiency are to be found. Very many houses in these districts have no septic tanks. In some suburbs a single change of pans is the rule. The pan system, even under the most favourable conditions, is objectionable and risky; under the control of careless people it becomes a menace. Under the model scheme of the Royal Commissioners minimum requirements would be set up and the local authority would be required to put its house in order. It is unnecessary in this place to discuss the subject of the water supply and the milk control. The question of the provision of sufficient water for the population is a medical one and should come under the purview of the health authority. Comparisons are sometimes drawn between the amount of water per head available in the great Australian cities and in the cities of Europe. In making these comparisons it should be remembered that in Australia the majority of houses have gardens; in European cities gardens are rare, save in the suburbs. This means that the water consumption per head in Australia is necessarily larger than in Europe.

The third group of diseases comprises infections that are spread by direct contact. The failure to control diphtheria on a large scale is deplorable. The demonstration in Bendigo of the feasibility of

discovering susceptibility of children to diphtheria and of protecting the susceptible children by immunization should have been followed at once by the application of these measures in every part of Australia. We have called attention to the fact that while real progress is being made in other countries in regard to the control of scarlatina and morbilli, little or nothing is being done in this connexion in Australia.

Mention is made in the report of pneumonia and of heart disease as conditions demanding the attention of the health authorities. The common cause of cardiac disease is rheumatic infection. These two groups of disease together with a host of others cannot be handled in the same manner as diphtheria. The suggestion that a division of epidemiology should be established in the Commonwealth Department of Health appears to be the best method of attempting to solve the problems involved. Investigations have to be carried out and observations recorded; statistical information must be collected and a survey taken in order that a plan of prevention can be devised. The fact that very little is known in regard to the epidemiology of either group should stimulate us to further effort.

The prevention of tuberculosis is accorded a separate chapter in the report. Similarly the Royal Commissioners deal with venereal disease by itself. The justification for this seems to be the fact that both diseases are very important to the community and strenuous measures have been taken to combat them. If the model scheme is satisfactory, it must include effective measures against tuberculosis and the venereal diseases. The problems are totally different and distinct. Much more information is required concerning the process of spread of tuberculous infection. We are still ignorant about the mechanism of spontaneous cure of tuberculosis. It is useless to speak of resistance or immunity, as many authors have done. Until some definition of the word resistance in chemical or physical terms is provided, no real progress can be made. There is no question that infection from person to person takes place. But there is equally no question that exposure to infection is frequently not followed by disease for a very long time. Again we know that susceptibility varies with age and that babies and

young children are peculiarly prone to the infection. There is much more evidence that the prophylaxis of tuberculosis is not a simple matter of preventing the contact of healthy and infected persons. The difficulty in the control of the venereal diseases is that of ascertaining every infection. Avoidance of contact is sufficient, if this can be achieved.

It seems to us that the scheme of the Royal Commissioners offers a good prospect of success in the attack on the common infective diseases.

### Current Comment.

#### APLASTIC TYPE OF PERNICIOUS ANÆMIA.

DURING latter years an aplastic type of pernicious anæmia has been recognized. According to Vaquez and Aubertin this type is characterized by the absence of poikilocytosis, of anisocytosis and of polychromatophilia, by a decreased number of leucocytes, a relative decrease in the polymorphonuclear cells and by the absence of myelocytes, of eosinophile cells, of nucleated red cells and of hæmatoblasts. In addition the coagulation time is greatly increased or coagulation fails to occur. Hurst considers that the most characteristic feature of pernicious anæmia is the great inequality in the size of the red corpuscles due to the presence of microcytes and megalocytes. He also points out that there is an increase in the average size in spite of the presence of some cells far smaller than the smallest cells found in normal blood.

Dr. L. E. H. Whitby and Dr. R. Jackson have recently described a case of pernicious anæmia of aplastic type which presented some unusual and interesting features.<sup>1</sup> They point out that during the Great War pernicious anæmia of aplastic type occurred in munition workers. They regard it as significant that their patient was a film varnisher and that this occupation involved the continuous use of "dope." They were unable, however, to trace any previous cases of disease among such workers or to find any evidence that the occupation was the primary cause of the disease. The patient was a male, aged fifty-one years. He was ill for one month before admission to hospital and was in hospital about seven weeks before he died. During the latter period the erythrocytes varied in number between 1,900,000 and 1,000,000 per cubic millimetre. The hæmoglobin value was between 38% and 22% and the colour index between 0.9 and 1.6. The leucocytes varied in number between 2,700 and 4,900 per cubic millimetre. The polymorphonuclear cells numbered between 46% and 61.5%, the lymphocytes between 32% and 48% and the large mononuclear cells between 2.5% and 5.5%. On one occasion only were eosinophile cells found. No nucleated forms of red cells were found, but large numbers of megalocytes

<sup>1</sup> *The Lancet*, January 30, 1926.



were constantly present. At *post mortem* examination both leucoblastic and erythroblastic cells were found in the reddish marrow of the femur. All stages of development of the red cell could be seen. The most striking feature of the section, however, was the presence of numerous phagocytic cells. These varied in size and shape, but most of them were large. The pale staining reticular nucleus of these cells lay towards the periphery of the cell and the protoplasm was in the majority of cases stuffed with red cells and pigment. Every form of red cell, megaloblasts, normoblasts and mature cells could be found within the phagocytes. Occasionally they contained leucocytes. Coliform bacilli in clumps were found in one or two places in the bone marrow section.

Dr. Whitby and Dr. Jackson in discussing this phagocytosis point out that the phenomenon has frequently been described as being due to the activity of cells of the liver, spleen, lymphatic glands and bone marrow. Aschoff has drawn attention to the fact that it may sometimes be the dominating factor in blood destruction. Peabody and Broun found that a certain amount of phagocytosis of erythrocytes occurs in normal bone marrow and to a greater extent in a variety of pathological conditions. They found it most prominent of all in the acute stage of pernicious anæmia. The question arises as to whether the anæmia was due to the phagocytosis or whether the phagocytes merely remove damaged cells and pigment which result from the activity of some other agent. Dr. Whitby and Dr. Jackson regard it as likely that the phagocyte ingests the white corpuscles and that the pigment is formed from the hæmoglobin within the phagocyte. They point out that in their case the phagocytes contained red cells especially megaloblasts which were apparently intact, and that the pigment was confined to the phagocytes. They regard it as improbable that such a complete phagocytosis of all the pigment would occur if the pigment was originally formed outside the ingesting cells.

Dr. Whitby and Dr. Jackson discuss the significance of megalocytes in aplastic anæmia. Megalocytes are usually regarded as the special product of the bone marrow when it is stimulated by a toxin. They serve a useful purpose in severe anæmia, for they usually contain a full quota of hæmoglobin and are capable of carrying a large amount of oxygen. Though their origin is obscure it is possible, if Turnbull's evolution of the erythrocyte be accepted, that they stand in close relationship to the megaloblast. In severe anæmia the megaloblast is seen in the bone marrow and sometimes in the peripheral circulation as a hæmoglobinized cell. It appears therefore that there is present a stimulus to early and complete hæmoglobinization of an immature red cell, a cell which normally contains no hæmoglobin. Dr. Whitby and Dr. Jackson hold that in parallel with the normal process there should be a tendency for the cell to shed its nucleus at the same time as it acquires its hæmoglobin. They regard it therefore as reasonable to suggest that megalocytes which are frequently associated with

hæmoglobinized megaloblasts, are really non-nucleated forms of the latter cell and that they provide a short cut from the megaloblast to a hæmoglobinized non-nucleated red cell in times of need. Dr. Whitby and Dr. Jackson refer to the fact that in the aplastic anæmia described by Vaquez and Aubertin no abnormal cells were found in the peripheral blood and that there was no hyperplasia of the bone marrow. In their own case and in the series collected by Dyke anisocytosis has been present, but with little or no hyperplasia of the bone marrow. In such cases, characterized clinically by an absence of remissions, the main compensatory mechanism seems to be the early hæmoglobinization of such cells as are produced by the marrow. In the hyperplastic area of bone marrow found in the femur in their case the main activity was megaloblastic and megalocytic. They regard this fact as supporting their views on the significance of the megalocyte.

Merely a short reference is made to the clumps of coliform bacilli found in the bone sections. In Dyke's series of cases stress was laid on similar findings. Dr. Whitby and Dr. Jackson regard the coliform bacilli as merely a terminal event in the cause of the disease. They give no reason for this opinion.

#### DIPHTHERIA FOLLOWING TONSILLECTOMY.

In this issue we publish the abstract of an article by Pilot and Tumpeer on the presence of hæmolytic streptococci in infants and children. Tonsillectomy undertaken in the case of children, such as those from whom the tonsils described by these authors were taken, will in the majority of instances be followed by no untoward symptoms. The raw surface left after the operation becomes covered by a slough. The slough separates after a few days and leaves a healthy granulating surface. The field of operation can under no conditions be rendered sterile and the freedom from symptoms of a dangerous nature in the presence of such a comparatively large raw surface is the result of what is known as the patient's resistance and the avirulence of the organisms present in his throat.

Dr. Abraham Zingher has recently reported four cases in which diphtheria occurred as a complication following tonsillectomy.<sup>1</sup> He points out that owing to the resemblance of a postoperative membrane to a diphtheritic pseudomembrane, diphtheria in those circumstances is serious in that it is likely to be overlooked until it is almost too late to use diphtheria antitoxin. Of Dr. Zingher's four patients one died and the remaining three suffered from postdiphtheritic paralysis of the palate. Dr. Zingher advises that cultures should be made from nose and throat swabbings as a routine measure before tonsillectomy and adenoidectomy. If Klebs-Löffler bacilli are found, diphtheria antitoxin should be injected, unless the patient has failed to react to the Schick test.

<sup>1</sup> *American Journal of Diseases of Children*, January, 1926.

## Abstracts from Current Medical Literature.

### OPHTHALMOLOGY.

#### Hereditary Glioma.

P. FIETTA (*Revue Générale d'Ophthalmologie*, July, 1925) discusses glioma. Glioma occurs most frequently in patients from one to four years of age and is unknown after sixteen years. Besides the conception that the growth arises from stray embryonic elements little is known of its causation and pathology. Infants untreated die and not all that undergo treatment survive, so that the number of affected individuals who reach maturity and have children, is small. The author's patient was the child, aged twenty-two months, of a woman aged thirty-six years. The daughter had a glioma and the mother when nineteen months old had an eye removed for "cat's eye." Reference to old records showed that she had a glioma. Berrisford in 1916 published the case history of a man, Thomas Grower, who had the left eye removed at five months. Of his two children the son had to be operated upon when three years old. The daughter had eight children, of whom the first three and the eighth died of bilateral glioma, the other four being normal. In 1919 Traquair published the case of a father whose eye was enucleated by Argyll-Robertson for a tumour and whose son and daughter both died from glioma. There are altogether twelve instances.

#### Clinical Value of Skiagrams of the Optic Canal.

H. A. GOALWIN (*Archives of Ophthalmology*, January, 1926) summarizes briefly a few directions for taking clear X ray pictures of the optic canals. The head, X ray tube and plate must be so placed that the central ray coincides with the optic canal and strikes the plate at right angles. The axis of the optic canal invariably strikes the lower outer angle of the margin of the orbit. It is therefore here that the optic canal is found in a good skiagram. The cross section of the canal is quadrant shaped, the radii of which form the roof and inner wall and the arc, the floor and outer wall. In oxycephaly a skiagram of the optic canal shows a triangular cross section, with the base downwards and outwards. Other changes in shape are those associated with variations in the extent of pneumatization of the surrounding structures, with chronic inflammation of adjacent structures, with orbital tumours or fractures. A soft tumour directly behind the canal will erode its posterior margin and give a more circular and larger section in the X ray plate. Increase or decrease of the thickness of the bony wall of the canal or variations of the density of the bone will each give a characteristic

plate. The taking of skiagrams is indicated in cases of optic neuritis, optic atrophy, retrobulbar neuritis, sphenoidal disease, orbital or optic nerve tumours, fractures and deformities and other conditions. They are important in medico-legal cases. Even a picture which displays no abnormal lesion, is of value. Details of fifteen cases are given.

#### Osmotic Therapy in Glaucoma.

W. S. DUKE-ELDER (*British Journal of Ophthalmology*, January, 1926) draws attention to the fact that although the possibility of lowering the tension of the eye by altering the osmotic condition of the blood has been known for a considerable time, the literature of cases so treated is scanty. The method was tried first by Cautonnet in 1904 and since then by many workers. The author reports details of four cases of glaucoma treated thus. Common salt is the most suitable drug used in 30% solution. A dose of one cubic centimetre per kilogram body weight, that is fifty cubic centimetres for an average adult, injected into a vein slowly and evenly for ten minutes, keeps within the margin of safety and has the desired effect. The lowering of intra-ocular tension thus obtained is transitory, lasting at most a day or two. The dangers of hypertonic injection are the initial sudden drop in blood pressure and the subsequent dehydration of the tissues. Osmotic therapy is useful in conjunction with myotics as a means of tiding over an acute case of glaucoma until such time as an operation can be undertaken conveniently or as a preliminary to operation. In one instance reported the tension fell from forty-five millimetres of mercury to twelve millimetres of mercury in half an hour.

#### Colour Vision in Monkeys.

J. A. BIEREUS DE HAAN (*Journal of Comparative Psychology*, December, 1925) after referring to previous work on the colour sense of animals, describes his experiments with two pig-tailed macaques (*Nemistrinus nemistrinus* L.). He used a wooden multiple choice apparatus with five circular openings each closed by a zinc swinging door. Above these openings were slides in which pieces of pasteboard, pasted with coloured papers, could be slipped. As a rule only the door under the colour, the monkey was required to recognize, was unlocked and behind this a piece of banana was placed. The colours used were white, blue, red, yellow, black. He was first educated for red. At the sixth and seventh day his training was complete, his errors were errors of attention, every time he looked at the coloured papers he made no mistakes. The experiment was controlled by substituting a series of new papers and further by using shades of grey in place of the colours other than red. The monkey was next trained for blue. He had to unlearn the association of the reward with red. This he

learned after about one hundred and eighty trials. He was then trained for green. The author concludes that monkeys see red, blue and green as colours and not as differences in brightness. The monkey could not be made to discriminate shades of grey. These findings were confirmed with the second monkey.

#### Ocular Symptoms of Erythraemia (Chronic Polycythæmia Vera).

G. E. DE SCHWEINITZ AND A. C. WOODS (*Archives of Ophthalmology*, January, 1926) from the clinical histories of thirty patients have endeavoured to depict the typical *fundus oculi* condition. In one group of nine patients the eye grounds appeared to be normal or not distinctive. In a second group of eight patients there was found dilatation of the veins without notable alteration in colour. In a third group of ten patients there was noted dilatation and tortuosity of the veins with definite changes in the colour of the vessels and of the fundi (cyanosis). In a fourth group of three patients in addition to changes in the size, calibre and colour of the veins the presence of hemorrhages or exudates was noted. These patients had high hypertension and arteriosclerosis which were held accountable for the retinitis. A study of these groups showed that the more pronounced ocular changes were associated with a higher hæmoglobin percentage rather than with a higher erythrocyte count. In the third group the hæmoglobin percentage averaged 135%, as compared with 104% in the first group. Cyanosis of the retina appears only when the erythrocyte count is 7,000,000 per cubic millimetre and the hæmoglobin percentage 125 or more. Hemorrhages are rare, but conjunctival hyperæmia is frequent.

#### Separation of the Chorioid.

F. H. VERHOEFF AND J. H. WAITE (*Archives of Ophthalmology*, January, 1926) relate the case of a chorioidal detachment in a man of middle age. When forty-nine years of age he began to suffer from severe diarrhoea which lasted until his death at sixty-six. At fifty-four years of age the sight of the right eye failed, the eye was enucleated. The clinical diagnosis was retinal separation. Tension was given as -3. At sixty-two years of age he lost the sight of the left eye, the condition being diagnosed by his ophthalmologist as retinal separation. The authors describe in detail the pathological condition of the enucleated right eye. The chorioid and ciliary body were widely separated from the sclera being attached only at the pectinate ligament and for about ten millimetres around the disc. The retina was closely applied to the chorioid. The causes of altered intra-ocular pressure with especial reference to separation of the chorioid are dependent on three factors, the outflow of fluid from the eye, the hydrodynamic pressure in the intraocular capillaries and the osmotic properties of the blood. The first explains post-

operative detachment of the chorioid. Escape of aqueous obliterates the anterior chamber, reduces the intra-ocular tension and the tension within the chorioid. Fluid is transuded from its vessels in greater amount than can be carried off and distends the subchorioid space causing separation of the chorioid. Alleviation in the osmotic pressure of the blood has been shown experimentally to influence intraocular tension. Increase of the salt or sugar content in the blood will reduce ocular tension. This factor seems to explain best the separation of the chorioid in the case described. The severe diarrhoea reduced the watery content of the blood and produced hypotonus and hence separation of the chorioid. Ophthalmoscopically the detachment may be seen as a projection with a smooth dark surface situated well forward.

## LARYNGOLOGY AND OTOTOLOGY.

### Hæmolytic Streptococci in the Pharynx and Tonsils of Infants and Children.

I. PILOT AND I. HARRISON TUMPEER (*American Journal of Diseases of Children*, January, 1926) have investigated the occurrences of hæmolytic streptococci in the pharynx and tonsils of infants and children. They point out that in broncho-pneumonia, empyema, otitis media and other serious conditions these organisms are frequently the predominant bacterial agents. In a previous study they pointed out that they were recovered from swab cultures of the pharynx and tonsillar surfaces in 61% of children, aged from six to fifteen years suffering from simple hypertrophy of the tonsils. From the crypts of the extirpated tonsil they were recovered in large numbers in 97% of cases. In adults who have not had their tonsils removed, hæmolytic streptococci occur four times as frequently as in those who have been subjected to tonsillectomy. Hæmolytic streptococci were also found in the extirpated adenoids of 61% of one hundred and three children aged from five to sixteen years. The authors have endeavoured to determine the incidence of hæmolytic streptococci in children under six years of age. The patients examined were afebrile and suffered from hypertrophic tonsils and adenoids. No purulent exudate could be seen in tonsillar crypts or follicles. Simple hyperplasia of the lymphoid tissue was present without fibrosis. Only tonsils which were completely enucleated, were examined in order to obtain uncontaminated cultures of the crypt contents. Hæmolytic streptococci were recovered in large numbers from the tonsils of twenty-five of twenty-eight children, aged from two to six years and from the adenoids of the same children in six of eleven cases. The organisms were fewer on the surface of the tonsils than in the crypts. The

associated flora included a few hæmolytic streptococci of the *a* type, constant numbers of *Streptococcus viridans*, pneumococci, hæmolytic and non-hæmolytic staphylococci, diphtheroids and Gram-negative cocci. The authors conclude that hæmolytic streptococci are to be regarded as normal inhabitants of the throat, residing chiefly in the crypts of the tonsils and adenoids. From these sources the streptococcal complications in the course of other diseases commonly arise.

### Intranasal Dacryocystostomy.

J. S. FRASER (*Journal of Laryngology and Otology*, November, 1925) discusses West's operation of intranasal dacryocystostomy and reports results obtained in forty-three patients operated upon between 1919 and 1924. He claims that in chronic dacryocystitis with dilatation of the tear sac, frequent probing of the tear passages is quite ineffective and that intranasal dacryocystostomy gives better results than the drastic excision of the tear sac usually practised by ophthalmologists. He describes fully his technique and the difficulties met with in the operation and has decided by experience that general anaesthesia together with local packing is preferable to local anaesthesia by itself. Of his forty-two patients thirty-one reported later and of these four had had both sides operated upon, that is thirty-five operations in all. Of this number twenty three or 65% were completely cured, three after a second operation. Of the remainder one continued to have abscesses with each subsequent pregnancy and in nine tears continued to run over the cheek. In two of the last-named group the tear sac was later excised by the ophthalmologist. Of fifty cases occurring between 1915 and 1918 and previously reported, forty-eight patients had been seen again. Of these thirty-eight or 78% were completely cured, five were considerably improved and in five failures were admitted. In conclusion the author is of the opinion that satisfactory results do not follow West's operation for epiphora without dilatation of the sac. He agrees with Freiberg that the canaliculi force the tears forward and that the prognosis of the operation depends on the proper functioning of the canaliculi.

### Cerebellar Abscess.

WILLIAM MILLIGAN (*Journal of Laryngology and Otology*, January, 1926) discusses cerebellar abscess which occurs as a complication of middle ear disease. Its progress is slow, the tissue destruction being insidious and painless. Statistics taken in world-wide investigations show that cerebral abscess is twice as frequent as that situated in the cerebellum, but the author's experience is the direct opposite to this. He finds the incidence to be most common in the second decade of life; males are more frequently

affected than females in the proportion of two to one and the left side is more frequently involved than the right. The actual path of infection is very difficult to trace, but occurs chiefly through the labyrinth or is secondary to a lateral sinus infection. The abscess is usually small in area, single and superficial, having an intimate relationship with the original focus. Regarding diagnosis the author considers that 10% of the cases are characterized by a latent course and lead to a fatal issue without a diagnosis being made. Apart from the classical signs of an intracranial lesion the author lays stress on the study of homolateral sensory disturbances and lesions of Deiter's nucleus to aid differential diagnosis. Further, head retraction, rigidity of cervical muscles, yawning, hiccup are signs suggesting cerebellar abscess. For treatment a lumbar puncture to lessen intracranial tension is performed immediately before the radical mastoid operation. The *dura mater* is then exposed anterior to the lateral sinus groove and the brain is explored. If no pus is found in this, the anterior cerebellar area, the *dura mater* is exposed behind the lateral sinus groove and the brain again explored. Pus should be evacuated slowly. The author inserts a special two-way silver tube and uses daily irrigation through it to maintain drainage. He assesses the mortality from 60% to 70%, but considers that results are becoming more favourable with earlier accurate diagnosis and improved operative technique.

### Pharyngeal Diverticula.

V. E. NEGUS (*Journal of Laryngology and Otology*, November, 1925) discusses evolutionary factors in the production of pharyngeal diverticula, a lesion which is confined to man. He points out that the common term "oesophageal pouch" is a misnomer, as the usual site lies at the junction of the lowest circular fibres with the adjacent oblique fibres of the inferior constrictor muscle of the pharynx. He suggests that the act of deglutition is a creeping upward of the oesophageal walls by the contraction of the longitudinal muscle fibres over the bolus already fixed by the contraction of the circular fibres above, rather than according to the usual conception, a contraction above and dilatation below the bolus. He draws attention to the important function of the *crico-pharyngeus* muscle in man and shows that faulty action in this muscle is a factor in causing diverticula. By comparing anatomically the pharynx and larynx of man with the lower animals, he claims to have shown why man alone is subject to diverticula formation. Practical predisposing causes of this lesion are in his opinion habitual swallowing of large boli or of food insufficiently masticated through the absence of dentures.



## British Medical Association News.

### SCIENTIFIC.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Broughton Hall Psychiatric Clinic, Leichhardt, on November 12, 1925. The meeting took the form of clinical demonstrations of a series of patients from Broughton Hall and from the Callan Park Mental Hospital.

#### Hysteria.

PROFESSOR SIR JOHN MACPHERSON showed a series of six patients in whom various hysterical manifestations were present.

One of the patients was a male, forty-three years of age. From the age of twenty-seven until he was thirty-six, this man had suffered from abdominal pain. He had been examined both clinically and by X rays and ultimately a needle had been discovered in the skin of the right iliac fossa. One year later the patient had become subject to hysterical fits, one fit occurring every two or three weeks. These fits had lasted for two and a half years. He had been free from fits for four years and they had recurred since February, 1925.

The second patient was a man, aged twenty-four years. He was married and his family history was unimportant. From the age of five to that of fourteen he had gone to school and had been a good scholar. His childhood had been uneventful. At the age of nineteen he suffered from appendicitis and had undergone an operation for removal of the appendix. He had been married twelve months previously and the marriage was happy. In March, 1925, the patient had cut the dorsal aspect of the second, third and fourth fingers of the left hand with a slicing knife while working in a butcher's shop. The hand had become septic and he had been treated in hospital for fourteen weeks. While in hospital the hand had been put in splints with the fingers extended for three weeks. After this active movement had been undertaken. Fifteen weeks after the accident he had suddenly lost power in the left arm while he was eating his breakfast and the fork which he was holding had slipped from his grasp. All the fingers and the thumb had become tightly flexed and this had been accompanied by tremor of the hand. Sir John Macpherson demonstrated this condition as it appeared at the time of the meeting and said that the patient had complained of violent left-sided pain in the frontal region and behind the left eye. He also complained of pain in the left calf with impairment of movement of the leg. The left arm up to the shoulder was anaesthetic. The patient had occasional attacks of anorexia with no desire or feeling of the want of food for twenty-four hours at a time.

A third patient, a female, aged fifteen years, manifested choreiform movements of hysterical origin. She was the eldest of three children. The other two were healthy. The mother had died of pleurisy. There was no nervous or mental trouble in the family. The child had been exceptionally bright at school, her childhood had been happy and she had had plenty of friends. Since her mother's death she had been living with her grandmother and this was generally supposed to be bad for a child. At the age of eight the child had fallen off a horse and had been blind for some days after. Sir John Macpherson thought that in all probability this blindness was hysterical. The patient's illness had begun one week prior to admission. The onset had occurred immediately after a disappointment at not having been asked to a friend's birthday party. The father had stated that the patient was a friend of a boy who suffered from chorea. The patient denied all recollection of this boy. Sir John Macpherson pointed out that the choreiform movements affected the whole body and that they became worse on excitement or when attention was directed to them. The movements ceased during sleep. The patient's temperature was normal. The heart and lungs were normal. The motor and sensory functions were normal, the knee jerks were exaggerated and the plantar reflex was flexor in type.

A female patient, aged twenty-one years, suffered from hysterical vomiting. Sir John Macpherson said that the patient's maternal grandfather and several aunts on both sides had died of cancer. The patient was third in a family of nine. She had been born prematurely at eight months, had been delicate and difficult to rear. While at school from seven to thirteen years of age she had been rather backward and reserved. At the age of sixteen she had suffered from excessive menstruation. Curettage of the uterus had been performed six times, her appendix had been removed two years previously and subtotal hysterectomy had been performed one year previously. After the first curettage she had lost control and fits had begun to occur. She had been amnesic in regard to her fits and had slept for hours after their occurrence. She complained of palpitation, choking sensations, fatigue and left-sided neuralgic headaches. For three months prior to admission she had suffered from anorexia and hysterical vomiting.

Sir John Macpherson also showed a male patient, aged twenty-two years, who suffered from hysterical hemianesthesia. He was a married man. He was a Roman Catholic and his wife was a Methodist. The family had been very much opposed to his marriage, but it had been happy. A brother had died of infantile paralysis, otherwise the family history was unimportant. The patient's childhood and school life had been normal. Four months previously while working at some steel works he had been hit on the right side of the head and shoulder with a piece of pig iron and had been unconscious for seven hours. He had been in hospital for three days suffering from concussion. Three weeks later he had had fits with unconsciousness and amnesia. He experienced a warning pain on the right side of the neck and head. During the fit he became rigid, but no convulsion occurred. The fits lasted for one hour and were followed by giddiness. He did not bite his tongue and the sphincters were not relaxed. The patient complained of fatigue, headache, giddiness and loss of power of concentration. He also had hemianesthesia of the left side which was complete with the exception of a small area on the side of the thorax. This area was insensitive to all stimuli except deep pressure. A small area around the site of the original injury remained sensitive. Concentric diminution of the field of vision was present.

The last patient shown by Sir John Macpherson was a woman, aged forty-four years, who was subject to cataleptic attacks of hysterical origin. The patient's mother, aged seventy-six years, was hysterical and the patient was the youngest of a family of five. The other members of the family were normal. At the age of two years the patient had received a fright and had not spoken till she was eight years of age. She had been caned at school for not speaking. At the age of ten she had suffered from enteric fever. At school she had been fairly bright and had made many friends. She had been married at the age of twenty-three years. The marriage had been unhappy and her husband had deserted her fourteen years previously. She had two children, one was healthy and the other was delicate. She had undergone an operation fifteen years previously and one ovary and one tube had been removed. Twelve months later the other tube and ovary had been removed. Two years previous to the meeting she had fallen from a tram and had struck the back of her head. She suffered from severe vertigo and these attacks were followed by headache. Nine months previously the patient had begun to suffer from attacks of unconsciousness. These were cataleptic seizures and the limbs remained in any position in which they were placed. During seizures in hospital the patient's conjunctivae had been sensitive. When Sir John Macpherson saw her before admission, he had found the conjunctivae insensitive. The reflexes were present while the patient was in the cataleptic state and the knee jerks were exaggerated. The plantar reflex was flexor in type. The seizure lasted from two to ten hours. The patient also suffered from hysterical anorexia and would go for three or four days without feeling the need for food. She also suffered from the *globus hystericus* and from hot flushes followed by sweating.

#### Catalepsy Due to Dementia Præcox.

DR. J. A. L. WALLACE showed five patients, two men and three women, who were suffering from the catatonic form

of *dementia præcox*. Dr. Wallace said that the patients manifested catalepsy which was one of the phases of catatonia. It was due to the plastic tone of the voluntary muscles. In extreme cases it was accompanied by loss of consciousness, but in the patients before the meeting there was merely loss of sensibility. The condition was well illustrated in the five patients.

#### Diabetic "Tabes."

Dr. J. Bostock showed a patient who was suffering from diabetic "tabes." This report will be published in full in a subsequent issue.

#### Tabo-Paresis.

Dr. Bostock also showed a woman, aged fifty-six years. She was married, had three living children, one child had been stillborn and she had had one miscarriage twenty-five years previously. There was no history of syphilis. The patient had been admitted to hospital on December 31, 1924, with a history that for six months she had been tired and languid and unable to do her household duties. Dr. Bostock pointed out that physically the patient manifested definite signs of *tabes dorsalis*. The pupils were unequal, the right was of the Argyll Robertson type and the left reacted sluggishly to light and accommodation. Rombergism was present, the vibration sense was lost in the lower limbs and the knee and ankle jerks were absent. A perforating ulcer was present in the foot. The serum had yielded a "partial positive" result when subjected to a Wassermann test. The patient had incontinence of urine. In regard to the mental condition, though orientated and possessing a fair memory, the patient gave evidence of considerable dementia. She spent her days knitting garments which she believed to be excellent, but which were in reality mere tangles of wool. She was euphoric and lacked insight.

A male patient, aged fifty years, had been admitted to hospital on August 17, 1925. The patient was a married man. His father's health was good. He had suffered from gonorrhœa thirty-eight years previously, but denied syphilitic infection. Ten years previously he had suffered from diplopia. His illness had commenced four and a half years previously with lightning pains in the legs. He had become irritable. For three years he had had difficulty with passing his urine. He had suffered from pains in the abdomen and back. Twelve months before admission he had become "frightfully irritable" and had lost weight. Dr. Bostock pointed out that the vibration sense was lost in the lower limbs. Rombergism was present. The pupils were equal; the right reacted briskly to light and accommodation and the left was sluggish. The knee jerks were absent. The plantar reflex was indeterminate. The gait was clumsy. The ankle jerks were absent. A girdle of anæsthesia was present on the left side over an area supplied by the first to the eleventh segments. On examination of the cerebro-spinal fluid it had been found that the globulin content was increased; a reaction had occurred to Lange's gold sol test and to the Wassermann test. The blood serum had also reacted to the latter test. As a result of the fractional test meal it had been found that the acidity of the gastric juice was within normal limits. When examined mentally the patient was found to be confused in regard to dates. He was uncertain of events which had occurred a week previously. He complained of poor memory for names and for recent occurrences.

Dr. Bostock said that the latter patient illustrated the slow onset of mild dementia in a case of tabes of long standing. It was noteworthy that the more rapid march of symptoms in the first patient was associated with greater mental impairment. Although the condition of the two patients did not entirely bridge the gap between *tabes dorsalis* on the one hand and general paralysis on the other, the manifestations suggested that a bridge was not impossible. The ages of the patients, fifty and fifty-six, were above that usual for general paralysis. A consideration of such examples served to remind them how difficult it was to understand why one individual should suffer from a cord lesion, another from a brain lesion while a third might have both involved.

#### Dementia Paralytica.

Dr. G. Ewan showed a male patient, aged forty-one years, who was the subject of *dementia paralytica*. The patient had been admitted to Callan Park Hospital about three weeks previously. He was a married man with three children and he was engaged in dairy farming. The family history was clear. The patient had suffered from typhoid fever at twenty years of age and from influenza during the epidemic. He had been operated on for a septic jaw. He had been married at the age of twenty-one years and divorced. He had married again at thirty-two years of age and this marriage was fairly happy. The patient had been quite well three weeks prior to admission when he went to a neighbour's house and said that he wished to buy eight or ten cows. Shortly after this he had developed some extravagant ideas about a butchering business at which he was going to make large sums of money. He intended to buy large numbers of motor lorries and motor cars in connexion with the business. Within a very short time his condition had necessitated certification.

On investigation of the patient's condition after his admission a history of syphilitic infection, fourteen years previously, had been obtained. The blood and the cerebro-spinal fluid had both reacted to the Wassermann test. A lymphocytosis was present and the globulin content of the cerebro-spinal fluid was increased. A reaction had been obtained to Lange's gold sol test. Dr. Ewan pointed out that the patient's memory was defective, he suffered from recent amnesia and chronology was impaired. Orientation was poor. He had fantastic and expansive delusions. In the course of examination the patient said that he intended to give £1,000 to every person who was present at the meeting. The patient's mood was euphoric and his emotion quickly changed. He was generally irritable and a clouding of consciousness was present. The patient had no insight into his illness and suffered from no hallucinations. The patient's ocular movements were good, the right pupil was larger than the left. No distortion of the pupillary outline was present. The Argyll Robertson phenomenon was absent and reaction to light was sluggish. The consensual light reflex could not be elicited. The reaction to accommodation was present. On examination of the patient's facies it was seen that a certain stolidity and one-sided appearance were present, the naso-labial fold was absent. The *orbiculares oculi* muscles were weak. The lower jaw was slightly deviated. Perioral fibrillary tremor was present together with fine tremor of the tongue and slight deviation of the *raphé* of the palate. The patient's speech failed when he attempted such phrases as "British constitution," "truly rural" *et cetera*. His reading was defective, words being omitted at irregular intervals. In regard to sensation his power of localization was somewhat impaired; he was sensitive to deep pressure. The muscle joint sense was moderately good. In regard to the general motor reactions flexion and extension at the elbow were weak. The grasp of the right hand was weaker than that of the left. The movements of the lower limbs were good. The upper extremities were slightly ataxic. Static ataxia was present in the lower extremities and the gait was moderately good. The deep reflexes were present. No clonus was elicited. The plantar reflex was flexor in type, the cremasteric and abdominal reflexes were somewhat exaggerated and the organic reflexes were intact.

In discussing the condition of *dementia paralytica*, Dr. Ewan said that the characteristic changes found on *post mortem* examination included a thickening of the *dura mater* and its adherence to the skull. The pia-arachnoid was opaque, thickened and adherent to the cortex; on its removal a worm-eaten appearance of the cortex was manifested. The cerebro-spinal fluid was increased in the sub-arachnoid spaces and the ventricles. The latter were dilated and lined by granular ependyma. Granulations were found on the floor of the fourth ventricle. As a rule some degree of wasting was found in the convolutions of the brain, especially in the frontal and middle lobes. The grey matter was reddened from increased vascularity.

On histological examination of the brain's substance the arterioles manifested cellular infiltration of the peri-

vascular lymph spaces with proliferation of the *tunica intima* and degeneration of the *tunica media*. An increase in the elements of the neuroglia occurred with numerous large spider cells. The nerve elements and especially Betz's cells were scanty and definite chromatolysis was found. Degeneration and atrophy of cells and fibres occurred. Some degeneration of the posterior columns of the cord or of the pyramidal tracks secondary to the cortical changes might be found.

Several theories of origin had been advanced. According to one the condition was brought about by a primary parenchymatous degeneration of the nerve element with secondary changes in the neuroglia and blood vessels. According to a second view the primary change occurred in the vessels and the secondary changes in the neuroglia and nerve elements. A third view was Fildes and McIntosh's theory of hyperaerergy.

#### Cretinism and Syphilis.

Dr. J. D. OAKESHOTT showed a female patient, aged twenty-eight years, who was a cretin. Her father had suffered from epilepsy, otherwise the family history was unimportant. The patient had been born in Sydney, she was the fourth child in the family and had been born prematurely at seven months. On inquiry it had been found that the patient first sat up at the age of ten months, that she walked at twelve months and talked at two years of age. She had suffered from no serious illnesses and had always been solitary and very shy and sensitive. At the age of fourteen her different appearance from that of other girls had been noticed by her parents. She had first menstruated at the age of ten, her periods had been irregular and she had suffered from a miscarriage at the age of twenty-four.

On examination it was seen that the patient's height was one hundred and forty centimetres (four feet eight inches). Her nose was broad, her lips were thick and her mouth partly open. The tongue was large. The eyelids were heavy and swollen and the hair was coarse. The skin was sallow and dry and the expression was dull. Indefinite fatty tumours were present just above the clavicle. The blood yielded a partial reaction to the Wassermann test. The urine was scanty and contained 0.2% albumen in addition to numerous granular and epithelial casts and pus cells. The patient was mentally retarded. Her mental age was seven years and ten months. Her intelligence quotient was forty-eight. Her disposition was placid.

Dr. Oakeshott said that it was interesting to note that although the patient suffered from definite cretinism, she had become pregnant. This was not by any means usual. The question also arose as to whether the syphilis might be congenital and in some way responsible for the cretinism; it was not usually mentioned as a course of the latter condition. It was probable that the syphilis had been acquired at the time of pregnancy. Another interesting fact was the complete absence of hydrochloric acid from the gastric juice.

#### Mongolism.

Dr. Oakeshott's second patient suffered from amentia of a mongoloid type. He said that mongolism commonly occurred in children coming at the end of a large family. In this case the father had had ten previous children, but the patient was an inbred child, being the result of union between the father and the daughter. Since the patient's birth the mother had married and had three healthy children. She had had no miscarriages. Dr. Oakeshott said that although the patient was regarded as a mongol, her condition was by no means characteristic. In support of the diagnosis were the small round head, the narrow palpebral fissures of mongoloid type, the short squat nose, dry and wiry hair, high and narrow palate, lax ligaments and a rough dry skin. On admission the patient had had a very pronounced malar flush, this had somewhat abated. On the other hand the patient had no ocular symptoms, the tongue was not fissured, nor had she the characteristic hands nor the cardiac lesions so frequently found. Although her aunt stated that the patient was usually an

irritable child, she had been happy and contented whilst in hospital; she had had two or three hysterical screaming attacks. Another fact against the diagnosis of mongolism was that she had slightly but definitely improved both physically and mentally under intensive thyroid administration. On analysis of a fractional test meal it had been found that the free hydrochloric acid of the gastric juice was greatly diminished.

A MEETING OF THE SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held on November 26, 1925, at the Lister Hall, Hindmarsh Square, Adelaide, Dr. C. T. C. DE CRESPIGNY, the President, in the chair.

#### Dentistry and Medicine.

MR. J. EDWARDS, D.D.S., read a paper entitled: "The Relation of Dentistry to Medicine" (see page 380).

#### Dental Radiology.

DR. H. C. NOTT read a paper entitled: "Dental Radiography" (see page 384).

DR. W. RAY read a paper entitled: "The Relation of Dental Infection to Medicine."

SIR JOSEPH VESCO expressed himself as very pleased that a joint meeting of the Branch and the Dental Society had been arranged and hoped that it might become an annual or more frequent function. Dr. Edwards's paper was upon the status of the dental profession. Sir Joseph Vesco thought this status had been raised very considerably during the past fifty years. Dentistry had been studied much more scientifically during that time and as a consequence its operations were more varied, more thorough, more exact and more rational. Probably they were also more numerous, because of the more widespread decay due to the unhealthy concomitants of civilization, the improper foods of children, their consumption of sweets and chocolates and the diminution of proper mastication partly from their softer dietary which did not demand it and partly from a consequently acquired habit of bolting food which did not require it.

He thought the status of the dental profession would be raised in proportion as it and the medical profession came to understand better the relation between their respective departments of work. And to this end it was desirable that the dentists should know more of medicine and the doctors more of dentistry. It was necessary that dentists should know how often and how much general medical diseases predisposed to or caused affections of the teeth and gums, so that when a patient was seen by them with such complaints, they should refer him to a medical practitioner for consultation as to the existence and treatment of such general conditions. On the other hand, physicians and surgeons should be alive to the fact of the frequency with which certain local dental troubles might be the fountain and origin of the evil in certain general affections and should refer such patients in consultation to a capable dentist for his opinion as to the existence and treatment of such causative dental affections. By these procedures both professions would profit as regards their mutual status and the patient would profit most of all. It was for the furtherance of these ends that dental students were required to take a course of general medicine and surgery during their curriculum and medical students a short course of instruction in the dental school. In both courses the lecturers should lay stress on the relation between dental and general diseases as mutually causal and consequential. It was significant that the University of London would not admit its Bachelor of Dental Surgery to the rank of Master of Dental Surgery unless and until he had taken also the degree of Bachelor of Medicine.

MR. LEONARD W. TROTT, D.D.S., in referring to the X ray pictures pointed out that hypercementosis was not an infective condition, but was frequently brought about in a tooth on which there was heavy and unusual biting stress,



sometimes called "traumatic occlusion." The root fillings in the pictures were certainly protruding through the apices too far, but a tooth should not be condemned for a slight protrusion of the root filling. Such well known dental writers as Dr. Rhein, of New York, advocated the encapsulating of the root end when filling a root canal.

Teeth which were in poor contact with one another as the result of a bad filling restoration or fillings which protruded beyond the cavities at the gingivæ, invariably led to the resorption of the alveolus in that part. The condition would readily respond to treatment.

The speaker wished to consider what he hoped to be the practical result of that meeting, namely the manner in which physician and dentist should cooperate. What did the medical man expect of the dentist when he referred a patient for an examination? On what should the dentist report and what was his obligation to the patient and to the medical practitioner? Unless some knowledge was previously obtained as to what the medical practitioner suspected of being present, a dentist's report should be divisible into four distinct divisions: (i.) The masticating power of the mouth and how it could be adjusted; (ii.) The presence of caries and how the teeth could be restored; (iii.) the condition of the gums and how they could be treated; (iv.) the presence of periapical foci of infection as discovered by X rays and how they could be eliminated.

In the first division the mouth was considered as a whole and a determination was made as to how the teeth worked in relation to one another. In the second division each tooth was considered as a separate unit. Although conditions in divisions three and four were more frequently looked for by medical men, these two groups certainly were of importance in maintaining bodily health and should not be overlooked. Gingival infection called for more judgement than any of the other conditions and he wished to lay stress on the point that dentists frequently saw patients whose gums bled freely and from these pus could be expressed from the gingival trough. With careful, persistent, conservative treatment, combined with the willing cooperation of the patient, these conditions might be improved, so that a normal equilibrium of the mouth seemed to be established, the gums could not be made to bleed and no pus was present around the teeth. A gingival infection did not always call for extraction, but the course to be taken was often decided by factors which were not seen in the mouth, such as the patient's general condition.

In regard to X ray examination, Dr. Trott regretted that time did not allow of his discussing this important part of the examination of the mouth. A few points were outstanding from the point of view of the examiner's report on a mouth. Firstly, no mouth could be reported in good condition unless an X ray examination had been made, especially if there were large fillings present or pulpless teeth. Secondly, many conditions of pyorrhea could be judged as hopeless and requiring extraction without X ray examination. The trained eye knew in such cases that the X ray examination would not help in the prognosis. Lastly, X ray examination showed that many teeth from which the pulps had been removed for years, remained healthy, functioned well and certainly deserved to be retained in the mouth. He had had patients referred to him with the question: "Have they pyorrhea?" He also had had patients referred with such a request as "Please X ray," but he thought that if a patient were referred for a general report and the trouble with its remedy were set out as he suggested, it would lead to far less confusion.

Dr. S. R. BURSTON thanked the various speakers for their interesting papers. He did not think that very definite opinions could be held as to what part infection of the teeth and gums played in the ætiology of general diseases. Clinical evidence was very confusing. Some patients improved in a remarkable manner after attention to infected gums and teeth, whereas others, apparently similar, showed no improvement. It was essential to collect all the clinical and pathological evidence possible and ultimately some definite ætiological relationships might be proved.

Mr. A. P. R. MOORE, B.D.S., referring to Dr. Nott's paper, said that he considered great caution should be exercised

before radiographic evidence was interpreted in terms of bacteria. He said that recent investigations had shown that absence of radiographic evidence did not preclude the possibility of an active infection being present, nor did the so-called positive radiographic evidence prove that bacteria were or ever had been present. Transradiant areas were not necessarily infected and infected areas were not necessarily radiopaque. Thus as far as the consideration of dental infection and systemic disease was concerned, radiographic findings could not be regarded even as suggestive of the steps that should be taken.

Mr. Moore expressed pleasure at being present at the combined meeting and although wishing to discuss other of the matters mentioned, such as types of patient susceptible to systemic disturbance as a result of dental infection *et cetera*, he felt it unfair to encroach further upon the time of other members desiring to speak.

Mr. JOHN A. O'DONALD, D.D.S., said that it gave him very great pleasure to be present at the joint meeting of dental and medical practitioners. Meetings which brought about close relationships of these two professions should be a great help not only to medical practitioners and dentists, but also to the public.

He entered a plea for team work between members of the two professions. Thorough medical and dental examinations should be made before it was decided to extract teeth. It seemed that in very many instances the extraction of teeth was an easy way of persuading the patient that the teeth were responsible for all his ailments. In many cases it was quite obvious that the patient's health would improve if the mouth were put in a healthy condition. This did not mean that the teeth should be extracted. In many instances with proper care and attention the teeth might be preserved without the patient's health being endangered in any way; on the contrary, it would rather be improved. There was no doubt that a definite relationship existed between dental disease and general ill-health and physicians and surgeons should be careful to enumerate this factor as one possible source of infection in systemic disturbance. They could do this by referring the patient for examination to the dentist who should be fully qualified to give a report on the general condition of the teeth. In most cases this report should include the results of an X ray examination as this was an important adjunct to a thorough dental examination. Also care had to be taken not to be too hasty in blaming the teeth for so many systemic disturbances. It should be borne in mind that stress had been placed on dental infection by such eminent medical men as C. H. Mayo and William Willcox. C. H. Mayo had made a statement that 60% to 70% of human ills were either directly or indirectly attributable to diseased conditions of the oral cavity. Willcox had recently discussed the question from the clinical aspect in an article in the *Proceedings of the Royal Society of Medicine*. It was impossible not to be impressed by statements of men who were so eminent in the medical profession. The important thing to remember was to be on guard against dental infection. This should be done in a sane way for it might be a possible source of infection.

In conclusion Mr. O'Donald thanked the members of the Branch for giving him an opportunity of attending the meeting and of listening to such interesting papers.

#### NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

Downes, Clement James, M.B., Ch.M., 1923 (Univ. Sydney), 9, Dickson Street, Haberfield.

Maitland, Herbert Lethington Chisholm, M.B., Ch.M., 1923 (Univ. Sydney), 147, Macquarie Street, Sydney.

Macpherson, James Simpson, C.M.G., L.R.C.P. (Edinburgh) 1886, L.R.C.S. (Edinburgh) 1886, L.F.P.S. (Glasgow) 1886, Red Hill, Burrowa.

## Obituary.

THE news of the death of Sir Harry Brookes Allen reaches us as this issue is in the press. It is proposed to publish an account of his remarkable career next week. Few men have influenced the development of medical education and of medical science in Australia more profoundly than he. None was more widely respected. The medical profession in common with the citizens of the Commonwealth pays homage to his memory.

## Correspondence.

### EDINBURGH MEMORIES.

SIR: There will be some Edinburgh students who remain, grateful to Dr. Scot Skirving for conjuring up long forgotten days and things. I came some years later than he did, but most of those he wrote of in your last issue were still commanding figures in the medical world of Edinburgh. I cannot say whether our more jaundiced eyes would now find them the *colossi* they then appeared to be, but without doubt they were big men in various ways. They had mostly their idiosyncracies which their students were not slow to take note of.

The most theatrical of them was Grainger Stewart. In appearance he would have been an apt subject for Holbein or Vandyke. One of his chief delights was to demonstrate to a visitor the cosmopolitan character of his clinical class. Seated majestically he would summon seekers of medical lore from remote regions of the far flung British dominions and white, black and brown they would answer the call. Grainger did not worry over much as to the extent or accuracy of their knowledge on these occasions as long they filled the geographical bill. I clerked with him and then transferred to Professor Fraser's wards as he was regarded as an awkward person to meet in the trial *viva voce* unless one knew something of his ways and views. My sojourn there came, however, to an untimely end. Put in charge of a case which required a daily quantitative test of the urine, I omitted this as in my judgement unnecessary. All went merrily till the day I was told that the professor would give a clinic on the case next day. I fled and never set foot in his wards again.

In my opinion the best teacher of clinical medicine was Byron Bramwell. Argyll Robertson was undoubtedly, as Dr. Skirving says, a great oculist and I spent a considerable time with him. The only thing I remember now of all his teaching was his horror of poultices applied to the eyes. This was a favourite household remedy in the Edinburgh slums and the sight of or hearing about such an application used to evoke a torrent of invective from Argyll.

MacBride, whom Dr. Skirving does not mention (perhaps he was after his day) ran a very modest ear and throat department. It may be news that I never saw an operation for adenoids—in fact never heard the condition mentioned. Probably MacBride knew something about it, for on one occasion I brought a small boy from the Cowgate to interview him. The reason for this was that the father had complained bitterly that night was made hideous by his offspring's snores and it seemed to me that MacBride might know something of the why and wherefore. So the boy was brought in. MacBride told him to open his mouth and inserted his finger. The patient closed his teeth with a snap. MacBride withdrew his finger and exploded into profanity; the boy was fired out of the room and with him went for years many chances of making the acquaintance of adenoids and thereby turning an honest penny.

As for Keith and his ovariectomies, they were caviare to me as to most of us. It is true we heard rumours of mysterious goings on in a distant tower of the hospital, but my curiosity was never sufficiently excited to prompt to further inquiries and I left Edinburgh without ever having seen the interior of an abdomen except in a cadaver.

In John Duncan's wards I spent much time and I can see him still, standing like a rock in the middle of his students, with his leonine head and flowing beard. His discourse was somewhat marred by an oft-recurring "Ha! Ha!" of a laugh. A story is told of him that a man met him and asked him how his (Duncan's) father was. "He's dead, Ha! Ha!" said John.

I went to John Chiene's class and never learnt anything there.

What lingers most in my memory is a morning in the ward with Chiene standing at a bed with a group of students round him. Suddenly the ward door opens and enters a gorgeous apparition. It was an Australian long since departed, but in that day the Beau Brummel of the University. A low cut waistcoat disclosing a shirt with broad red and white horizontal stripes, cuffs to match and the *tout ensemble* in keeping. Chiene stopped speaking and fixed his eye on this gentleman as he strolled leisurely up the ward. Then at last he turned to the class and holding up his hands, exclaimed: "My God! What's this?"

It is true, as Dr. Skirving relates, that there was an antiseptic of sorts carried out and in some wards a clerk was set aside to hump round the unwieldy apparatus whence issued the carbolic spray. But this spray and the lotions that came later covered a multitude of shortcomings. It was quite a usual thing for any distinguished visitor who was present at an operation to be invited to put his finger into a wound. Sometimes he dipped the finger in a lotion before doing so, sometimes he did not! Dr. Skirving mentions ether as having been given, but I, coming after him, never even heard of it. He describes accurately the method by which we gave chloroform. There must have been some special providence watching over the cases in those days, for we certainly never spared the chloroform to spoil the operation.

Dr. Skirving has confined himself to the surgeons, but I would have liked much a pen portrait from him of the gynaecologists, Simpson and Halliday Croom. Simpson was truly a quaint figure. I do not suppose the twentieth century holds anything like him and I will not set out to try and describe him.

I remember him asking one of his class how he would treat a certain condition and receiving a jaunty reply, Simpson countered: "Ye had better take care, my man, or ye'll have the police after ye!"

Croom was what a Yankee flapper would call "a scream" and yet he was a great teacher.

Arrayed while lecturing in a dress coat he held a saw-dust fœtus by the legs and drove home his points by thumping the table or clerks with it.

Dr. Skirving could doubtless tell some vivid stories about Rutherford, the Professor of Physiology, but he being discreet, it is not for me to be less so.

I could meander on indefinitely in this way, but you would not permit, so I end by again thanking Dr. Scot Skirving for bringing back the days that are no more, tempered with the lament:

"*Eheu, fugaces, postume, postume*"—

"The years roll away and are lost to me, lost to me."

Yours, etc.,

RICHARD ARTHUR.

Macquarie Street, Sydney.

March 12, 1926.

### THE INTERMEDIATE HOST OF *FASCIOLA HEPATICA*.

SIR: With regard to an article published in your issue of March 13 on the intermediate host or hosts of *Fasciola hepatica* by Mr. McKay in which there are references to a paper by me in your issue of February 6, may I be permitted the following comment?

In June 27 issue of the journal I published a note on the fluke carrying capacity of *Limnæa brazieri* and remarked that "the local distribution of *Limnæa brazieri* is consistent with the hypothesis that it is a transmitter of the sheep fluke." As the result of further work in Monaro I formed the conclusion that there was a strong *a priori* case that *Limnæa brazieri* was the principal transmitter of fluke in that district. This tentative conclusion was founded on a detailed survey of the local conditions, water collections, varieties of snails present and several thousand individual examinations for cercariæ and their cysts in water snails in Monaro.

I then had the favour of a visit to my Sydney laboratory of Mr. McKay and we discussed the matter. I informed him as to my conclusions and the reason for them and *inter alia* he told me that he did not think I was correct as he had just completed a survey in New England and did not find *Limnæa brazieri* to be present in sufficient numbers and distribution to fit the facts of fluke dissemination.

Shortly afterwards having satisfied myself that no other snail seemed to fit in as fluke transmitter in the particular area of Monaro studied by me, I went to New England and there found as I had anticipated that *Limnæa brazieri* was present in all known fluky paddocks examined by me and generally absent where there was no fluke.

My opinions have been published from time to time in the *Stock and Station Journal* and elsewhere.

I have also on numerous occasions stressed the point that although I had established a good *a priori* case or working hypothesis that *Limnæa brazieri* was the most important transmitting agent, that it might not be the only one.

Since then, as stated in my recent paper, I have received standard material from Cawston, in South Africa, and drawings from Faust, of Pekin. This material lent additional support to my hypothesis.

I summarized my opinion on this matter by stating in my last paper (see THE MEDICAL JOURNAL OF AUSTRALIA, February 6, 1926, page 159, last paragraph) thus:

"A strong *a priori* case has been established for the theory that *Limnæa brazieri* is the transmitting agent of the fluke sheep in New South Wales."

On the same page, opposite column and twelfth line I state: "The case cannot be conclusively proven unless the actual miracidia of the fluke are shown to enter and develop in the *Limnæa* snail."

It will be seen from the foregoing that the criticism of Mr. McKay in the first part of his communication is only what I had already applied to my own work and the implied suggestion that my reasoning was faulty, is unwarranted. It also shows how profoundly Mr. McKay has altered his views since he visited me and had put before him my epidemiological and other results.

The principal object of this note is, however, to examine the "conclusive proof" of Mr. McKay.

This "conclusive proof" amount to this: Cysts (approximate number unstated), obtained from cercariæ (of which he gives no adequate description or measurements) obtained from *Limnæa brazieri* were fed to a number (unstated) of "experiment animals" (species unstated). After a time (unstated) one of these animals died (cause of death unstated) and it was found to contain thirty-two flukes identified as *Fasciola hepatica*.

I can imagine Koch turning in his grave if this sort of "evidence" (?) is to be labelled as "proving conclusively" anything except Mr. McKay's ignorance of the famous "postulates."

Mr. McKay says that he intends to publish later a more detailed account and perhaps this will contain the missing evidence required for proper scientific proof. If so, I will be the first to congratulate him; but for his own sake and for the sake of the reputation of Australian scientific work let me ask him not to hurry or be hurried by others into claiming "conclusive proof" unless at the same time he produces the full evidence on which he relies and shows full controls for all possible fallacies.

Such incomplete statements accompanied as his are by claims of "conclusive proof" will make Australian research a laughing-stock to any people conversant with the elementary rules of logic.

Yours, etc.,

BURTON BRADLEY.

211, Macquarie Street, Sydney,  
March 16, 1926.

## Post-Graduate Work.

### POST-GRADUATE COURSE IN ADELAIDE.

THE Council of the South Australian Branch of the British Medical Association is organizing a post-graduate course in Adelaide from May 26, to May 29, 1926. This course will comprise clinical demonstrations by members of the several staffs of the Adelaide Hospital, The Children's Hospital, "Mareeba" Babies' Hospital and the Queen's Home. The course will be open to all members of the South Australian Branch of the British Medical Association who will not be required to pay a fee for attendance. Those who propose to attend the course should notify the fact before May 1, 1926, to the Honorary Medical Secretary of the Branch, Dr. F. N. Le Messurier, 195, North Terrace, Adelaide. Members of the Branch are invited to make suggestions concerning the subjects for demonstration.

### LISTERIAN ORATION.

It is announced that Professor F. Wood Jones has been invited to deliver the Listerian Oration of the South Australian Branch of the British Medical Association on May 27, 1926, at the Lister Hall, Hindmarsh Square, Adelaide.

### JOHN IRVINE HUNTER MEMORIAL FUND.

THE following additional subscriptions have been received by the Honorary Treasurers of the John Irvine Hunter Memorial Fund:

Previously acknowledged .. .. .	£1956 17 3
W. C. Wentworth, Esquire .. .. .	10 10 0
A. J. Canny, Esquire .. .. .	5 5 0
Dr. R. I. Furber .. .. .	5 5 0
Professor Colin MacKenzie .. .. .	3 4 0
Dr. C. R. Furner .. .. .	2 2 6
Miss S. J. Williams .. .. .	2 2 0
Value of cheque from Mayo Foundation for Medical Research for \$500 .. .. .	101 16 5
	£2087 2 2

### THE AUSTRALIAN JOCKEY CLUB WAR MEMORIAL CONVALESCENT HOME FOR CHILDREN.

THE Australian Jockey Club War Memorial Convalescent Home for Children, "Canonbury," at Darling Point, Sydney, was opened on March 15, 1926. This home was originally established for permanently incapacitated sailors and soldiers, but fortunately the need for such an institution has now ceased to exist. It has therefore been decided to utilize the war memorial for the restoration to health of children. The need of a convalescent home in Sydney is considerable, since many of the little patients require prolonged rest in happy surroundings after their discharge from the metropolitan hospitals. The home is admirably situated and commands a delightful view of the harbour with its fascinating traffic of ships coming and going.



There will be an honorary consulting staff and a full staff of highly trained nurses. Children between the ages of three and fourteen will be admitted from the metropolitan hospitals. Preference will be given to the children of returned sailors and soldiers. The little patients will remain under the care of the honorary medical officer who attended him or her at the metropolitan hospital before discharge. It is anticipated that the beds will be occupied mainly by children with surgical conditions. No child suffering from tuberculosis or other infective disease will be admitted. No child under sixteen years of age will be allowed to visit the institution, so as to reduce the risk of the introduction of infectious diseases.

### Medical Appointments.

Dr. Alan Thomas Britten Jones (B.M.A.) has been appointed Surgical Registrar, Adelaide Hospital.

Dr. Aubrey Julian Lewis (B.M.A.) has been appointed Medical Registrar, Adelaide Hospital.

Dr. Annie Mildred Mocatta (B.M.A.) has been appointed Honorary Assistant Pathologist to the "Mareeba" Babies' Hospital, Adelaide.

The undermentioned have been appointed members of the Advisory Committee in connexion with Medical and Dental Inspection in State Schools, Victoria: Sir James William Barrett (B.M.A.), Dr. Bernard T. Zwar (B.M.A.) Dr. Edith Helen Barrett (B.M.A.) Dr. Edward Robertson (B.M.A.) Dr. Thomas Walker Sinclair (B.M.A.) Professor Frank Clare Wilkinson (B.M.A.) and Dr. Clarence George Godfrey (B.M.A.).

Dr. Charles Alfred Hogg (B.M.A.) has been appointed to the Commission of the Peace for the State of New South Wales.

Dr. Arthur George Stening Cooper (B.M.A.) has been appointed Government Medical Officer at Denman, New South Wales.

Dr. Peter Lalor has been appointed Acting Medical Superintendent of the Hospital for the Insane at Sunbury, Victoria.

### Books Received.

THE CONQUEST OF DISEASE, by David Masters, with an introduction by Sir James Cantlie, K.B.E., F.R.C.S.; 1926. London: John Lane. Sydney: Angus and Robertson, Limited. Crown 8vo., pp. 330, with illustrations. Price: 8s. 6d. net.

UTERINE HÆMORRHAGE, by Samuel J. Cameron, M.B. (Glasgow), F.R.F.P. & S.G., and John Hewitt, M.B. (Glasgow); 1926. London: Edward Arnold and Company. Crown 8vo., pp. 208. Price: 8s. 6d. net.

ELEMENTARY HYGIENE FOR NURSES: A HANDBOOK FOR NURSES AND OTHERS, by H. C. Rutherford Darling, M.D., M.S. (London), F.R.C.S. (England), F.R.F.P.S. (Glasgow); Third Edition; 1926. London: J. and A. Churchill; Crown 8vo., pp. 261, with illustrations. Price: 5s. net.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx.

CAIRNS HOSPITALS' BOARD: CAIRNS DISTRICT HOSPITAL: Junior Resident Medical Officer.

SYDNEY HOSPITAL, SYDNEY: Honorary Assistant Gynaecological Surgeon; Honorary Physician.

SYDNEY HOSPITAL, SYDNEY: Honorary Medical Staff.

RICHMOND DISTRICT HOSPITAL, QUEENSLAND: Medical Officer.

VICTORIAN EYE AND EAR HOSPITAL: Resident Surgeons (Three Vacancies).

### Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Hon- orary Secretary B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

### Diary for the Month.

- APR. 6.—Tasmanian Branch, B.M.A.: Council.  
APR. 7.—Victorian Branch, B.M.A.: Branch.  
APR. 7.—Western Australian Branch, B.M.A.: Council  
APR. 8.—Victorian Branch, B.M.A.: Council.  
APR. 8.—New South Wales Branch, B.M.A. Clinical Meeting  
APR. 9.—Queensland Branch, B.M.A.: Council.  
APR. 13.—Tasmanian Branch, B.M.A.: Branch.  
APR. 13.—New South Wales Branch, B.M.A.: Ethics Committee.  
APR. 19.—New South Wales Branch, B.M.A.: Organization and  
Science Committee.  
APR. 20.—Tasmanian Branch, B.M.A.: Council.  
APR. 20.—New South Wales Branch, B.M.A.: Executive and  
Finance Committee.  
APR. 21.—Western Australian Branch, B.M.A.: Branch.  
APR. 23.—Queensland Branch, B.M.A.: Council.  
APR. 27.—New South Wales Branch, B.M.A.: Medical Politics  
Committee.  
APR. 28.—Victorian Branch, B.M.A.: Council.  
APR. 29.—New South Wales Branch, B.M.A.: Branch (Ordinary)  
APR. 29.—South Australian Branch, B.M.A.: Branch.

### Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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